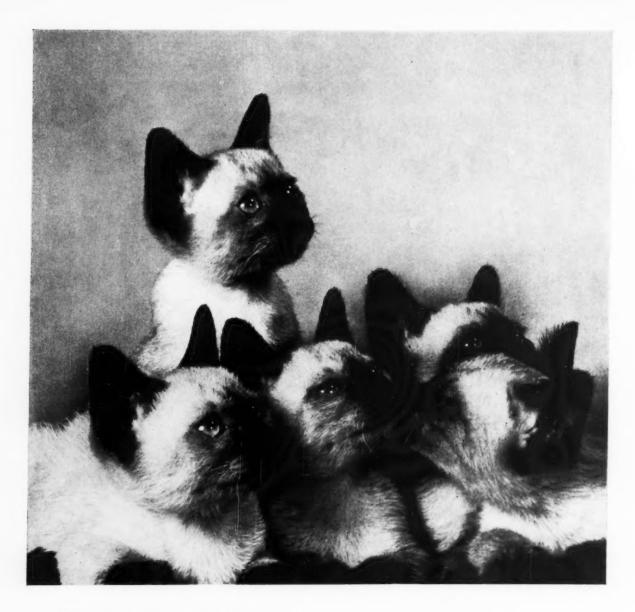
## SOAP AND CHEMICAL SPECIALTIES SPECIALTIES



Avard E. Fuller, newly elected president of Fuller Brush Co., Hartford, Conn., one of largest U. S. specialties firms. New Fuller plant in background nears completion.

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Essentially for you



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flavor bases dry soluble seasonings essential oils aromatic chemicals perfume bases because it's the liveliest, the brightest, the most daring. Perhaps its eyes sparkle a bit more mischievously, or its ears are cocked at the most extreme angle. Whatever the reason, from a litter of kittens, one is always singled out for a lion's share of attention from both the mother and affectionate onlookers. In a group of perfume compositions, too, one is always outstanding, but there is an excellent reason. The perfect combination of skill and imagination, experience, knowledge and the finest of raw materials are the ingredients that make a perfume stand apart from all the others. In a group of fragrance products, that one will be D&O!

Technical assistance available on your premises.

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Company

our forty-ninth year



Onyx Oil & Chemical Company / Jersey City 2, New Jersey

For private brand resale buyers of waxes and kindred products

.Your Quality Guide

#### WATER EMULSION WAXES

Each of Candy's floor waxes are all-around top quality for certain traffic conditions. They impart the finest protection and beauty to floors for which best suited.

CANDY'S SUPREME (standard) **BRIGHT BEAUTY®** CANDY'S SUPREME Special WR SUPER CAND-DOX®

CAND-DOX® # CS CANDI-WAY #6000

All Candy's products are available for private brand resale and are sold only through distributors except for experimental accounts in Chicago essential to research.

#### **Beauty and Durability**

Initial appearance is important, but for a waxed surface to remain beautiful, it must be durable. Durability depends not only on resistance to abrasion of traffic, but even more so on resistance to discoloring marks. Durability should be measured by how long the waxed surface maintains a nice appearance before complete removal and re-waxing is required.

#### Anti-Slip

Anti-slip, or reasonable safety underfoot, does not mean that the qualities of beauty and protection need be sacrificed. The proper balance-a wax film which is not excessively slippery, yet which is not tacky and does not collect dirt readily-gives the performance that answers the foremost original reason for use of a floor wax...beauty and protection.

#### Water Resistance

Frequent damp mopping or wet traffic can make water resistance very important. Over-doing this quality when no problem exists out of the ordinary, simply increases the difficulty of complete removal or applying multiple coats. Removability must be considered as important as waterresistance under most normal conditions.

#### **Solid Content**

The percentage of solid content is not nearly as important as the  ${\it quality}$  of the solids. Good quality indicates 12% of solids as the answer for most well planned maintenance programs. Two applications of 12% gives better results than one of 18%. "Washed out" floors and other special problems maintain better when more concentrated waxes are used. Overwaxing and resultant greater difficulty in removal for periodic maintenance may do more harm than good.

#### Carnauba Wax

The most important features of a good wax...all-around quality of performance...are built around Carnauba Wax. When refined and compounded with other additives and scientifically controlled in manufacture, Carnauba alone imparts the beauty and protection that makes the use of floor waxes both profitable and possible. Make-shift manufacture or over-emphasis on any one given wax feature should be avoided and proper care taken to provide for most satisfactory performance.

#### Other HIGHEST QUALITY products of CANDY & COMPANY, Inc.

CANDI-COAT 1000, WATER RESIN EMULSION

As a floor coating for use under specific conditions of continued main-tenance on certain types of floors this water resin emulsion has none of the faults associated with coatings of this type. It is the finest product in its class produced up to this time.

Bright Beauty WAX REMOVER & all-purpose SURFACE CLEANER For removal of water-emulsion waxes from any floor without harmful effects. It is the perfect maintenance program wax remover and all-purpose surface cleaner. Pleasant odor, crystal clear color and thorough cleaning action with all types of equipment. Unaffected by hard freezing. Furnished ready for resale or in concentrated form for local packaging...nothing but water to buy or mix in.

Bright Beauty CREAM FURNITURE POLISH

A cream furniture polish that spreads easily, polishes without excessive effort to a deep impressive lustre. Permits repeated repolishing with a dry cloth, thus saving many re-applications. A very economical polish of the very highest quality.

**Bright Beauty PASTE WAX** 

Properly blended and refined from excellent quality solids and solvents that produce the best drying time and evaporation. Easy to handle, hav-ing "creamy" consistency and stability that lasts throughout storage and usage life.

Bright Beauty LIQUID (spirit) PREPARED WAXES A complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each acts as a "dry

cleaner" to keep surfaces waxed protected with a superb coating necessary for many applications such as wood and certain other types of floors; for bars, wallpaper, etc.

Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH As a glass cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanliness to glass. As a cleaner of silver, it polishes to a high lustre without abrasion and can even correct the abuses of scratchy "quickpolish" inferior products.

Bright Beauty DANCE FLOOR WAX
Does not "ball-up" and gather dirt that impregnates floors with hard spots difficult to remove...free from dusty effects. Its protective quality adds more "floor-years" to expensive ballroom floors.

Bright Beauty Heavy Duty PASTE CLEANER
Cleans and scours more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive qualities, it frees almost every surface from all foreign

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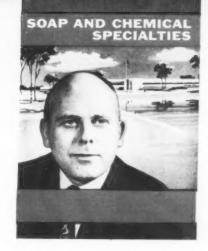
Wax Specialists for over 65 years

2515 W. 35th ST., CHICAGO 32

MA(

Volume XXXV, No. 6-June, 1959

Cover photo: Avard E. Fuller, new president of Fuller Brush Company, Hartford, Conn., succeeds his brother, A. Howard Fuller who was killed in an automobile accident May 9. Alfred C. Fuller, father of the new president, remains as chairman. See details on page 163.



MEMBER



**SINCE 1934** 

#### IN THIS ISSUE

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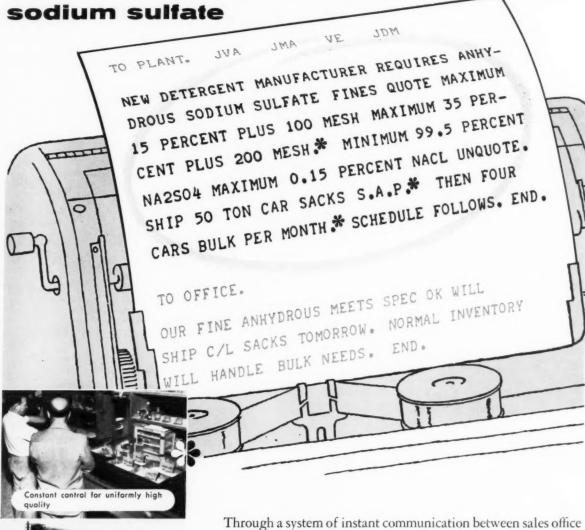
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Makon 10 is a nonyl phenoxy polyoxyethylene ethanol offering excellent detergency, foaming, dispersing, emulsifying and solubilizing action. It will not hydrolyze in aqueous solutions of alkalis or acids. It can be used with anionic, cationic or other non-ionic agents. Makon 10 is effective in hard or soft water, as it does not form salts with metallic ions and is also unaffected by oxidizing or reducing agents.

STEPAN Make



Physical State: Clear viscous liquid

Color: Pale yellow to colorless Cloud Point of 1%

Solution in Water: 52°-56°C Neutral pH (1% solution): Solidification Point

(°C): 4° 290° Flash Point (°C): 330° Fire Point (°C):

Density: 8.85 lbs. per gallon

Specific Gravity (25°C): 1.06

Send Coupon for Further Information and Sample

## CHEMICAL COMPANY

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America's Most Complete Line of Surfactants - Make Stepan your "SHQ" (surfactant headquarters)

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Firm			
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#### Chemical news primes the profit pump

Anyone who has ever done duty on the business end of a pump handle can tell you that often the difference between just getting exercise and getting water is a cupful of priming water to wet the leathers and start things flowing. Drawing a full flow of profit from today's well of competitive business takes the same priming. New chemicals . . . new processes ... new techniques ... provide the prime. Any one of these news capsules may be just the "cupful" you need to start profits flowing.

You	ma	y w	rish	to	check	ce	rtain
items	in	this	ad	vertis	ement	and	for-
ward	to	tho	se	conc	erned	in	your
comp	any						

ROUTE	10.		

### **ALL-PURPOSE EMULSIFIERS** MAKE FORMULA CHANGES EASY

Ethanolamine ends needle-inthe-havstack hunt for the right emulsifier when formulas change. By simply varying any of the several components: the ethanolamine-fatty acid ratio, the mixing techniques, the concentration of amine soap, or the fatty acid used — a wide range of emulsifying characteristics can be obtained to meet changing formula requirements.

Changing formulas can be a real ordeal, because the advantage gained in switching ingredients can be lost in looking for the right emulsifier. By using ethanolamines, emulsifiers can be the least of your worries.

More and more, manufacturers with emulsion problems are giving up their specialty emulsifiers with the "prima donna" complex for versatile, switchhitting ethanolamines that can slug it out for extra profit . . . no matter what formula curve is thrown.

"Hunting for the emulsifier with the right emulsion viscosity was always like looking for a needle in a haystack," a chemist reports. "We find now, by just altering the ethanolaminefatty acid ratio, we hit the viscosity we want right on the nose every time."

The mixture of ethanolamines with fatty acids produces emulsifiers with a broad range of emulsifying characteristics. The soaps produced by the combination are practically neutral-with a pH of approximately 8-and are soluble in both water and organic solvents. Because of their neutral nature, these emulsions are noncorrosive.

Dow's three ethanolamines ("mono". "di" and "tri") are helping improve the products and profit position of many manufacturers of polishes, detergents, cleaners, cosmetics and other specialty chemical products.

In certain formulations ethanolamine soaps will effect inventory and production economies. You only need one product to do the job it formerly took two or three to accomplish.

Products that fall within the wide

emulsification range of ethanolamines can profit from them. Complete information on these versatile emulsifiers will soon be available from Dow.

#### **CHELATING AGENTS:**

#### More and more for less and less

The days are long gone when chemists experimented on metal ion control with test tube quantities of hard-tocome-by chelating agents. Now, whenever and wherever a metal ion problem rears its head, there's an ample supply of chelating agents to solve it in short order . . . and at low cost!

The ability of chelating agents to inactivate trace metals in solution has



amines combine with fatty acids to yield unusual scaps that stabilize oil-in-water emulsions, soluble cutting oil formulations and detergent solutions.

made possible the production of soaps that won't cloud or clog dispensers and that will withstand hard water on an even footing with syndets.

"We used chelating agents in spite of their price at first because we had to keep our liquid soaps clear," one soap maker reports. "Now we're able to get top quality soaps and favorable economies as well."

One reason for the dramatic reduction in the cost of chelating agents is Dow's big new Texas plant. Increased production facilities such as these have not only made Dow a leading producer but have served to bring about

progressive price reductions in recent years, opening up many new applications for these remarkable "ion tamers".

Dow chelating agents (manufactured under the trademarks: Versene®, Versenol® and Versenex\*) are available to solve a wide variety of metal ion problems in processing and products.

#### CHLOROTHENE:

#### More profit for aerosol makers

A pressure depressant that doubles in brass as a solvent is multiplying profits for aerosol manufacturers. It's Chlorothene<sup>®</sup> (Dow 1,1,1-trichloroethane, inhibited), a cost saving component in propellant systems.

Measurable savings with Chlorothene are not the only reason for its quick acceptance. In certain formulations, Chlorothene also reduces fire



hazard. For instance, in hair spray formulations Chlorothene can replace a portion of the alcohol and effectively reduce the flame extension of the formulation.

Chlorothene is also the preferred pressure depressant in many insecticides, room deodorants, moth-proofing sprays, spot removers, pet sprays, mold-release sprays and lubricants.



If you aren't already profiting from these and other Dow chemicals, discover how you can. We suggest you write for complete information to THE DOW CHEMICAL COMPANY, Midland, Michigan, Chemicals Sales Department 973ER6.

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#### Dow chemicals basic to the soap and chemical specialties industry

Raw Materials

Extractive Agents • Purifiers
Aromatics • Solvents
Coagulants • Preservatives
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Low toxicity and excellent organic solubility of Dowanol® DPM make it ideal as a coupling agent in cosmetics formulations.



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You get

lowest-cost
compounding flexibility
with Monsanto
detergent phosphates...

### THE ONE

# "RIGHT" STP DENSITY FOR EACH PRODUCT

In your search for new and improved detergent products, take a new look at what Monsanto STP can do for you. From three STP densities, Monsanto can always deliver the one "right" density for each product you make . . . give you lowest-cost compounding flexibility to best meet every detergent-building need.

**EXAMPLE:** Monsanto's light-density STP gives you the faster solution rates you need at high concentrations or low temperatures. It will carry the most liquid active and still remain free-flowing. And because Monsanto's light-density STP stays granular and low dusting, it causes no irritation in the plant, resists caking and gives uniform bulk.

You get lowest cost when you make one-stop volume-discount purchases—and Monsanto gives you the opportunity to carry out one-stop purchasing most often. You can get any one STP density or combination of densities in mixed shipment with the widest variety of sodium and potassium phosphates available—as well as with a complete line of SANTO-MERSE (anionic) and STEROX (nonionic) surface-active agents!

In bag, drum or carload, each density of Monsanto STP is immediately available from a plant, warehouse or service-minded distributor near you. For more information, use the convenient coupon.

Santomerse, Sterox: Monsanto T.M.'s., Reg. U. S. Pat. Off.

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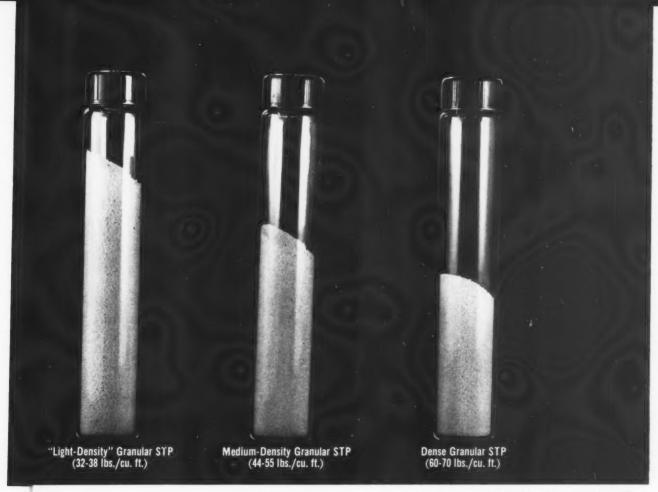


For low-dusting granules that soak up liquid active

For free-flowing, for most dissolving dry compo bulk a

With no bias in favor of any single STP density,
Monsanto draws from broad, basic knowledge of all detergent

phosphates to answer your specific compounding questions



For greater liquid loading of your dry detergents, for faster dry detergent solution rates, for more bulk and low-dusting...specify Monsanto "light-density" STP.

For profitable repeat sales for your regular line, make Monsanto's medium-density STP your standard. You can always trust in highest quality and uniformity.

Vials contain exactly the same weight of STP

To cut packaging costs, you can decrease the bulk and container sizes for your industrial detergent compounds by specifying Monsanto dense granular STP.



ng, for most profitable compound compo bulk and package size

ons.

Let this 36-page Guidebook or, better yet, a Monsanto representative give you more facts about industry's largest and most diversified line of phosphates. Just fill in the coupon.



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SOAP and CHEMICAL SPECIALTIES

# HYONIC® SURFACTANTS MAKE ALL DETERGENTS BETTER

Nopco's large and fast-growing line of Hyonic surfactants is helping manufacturers throughout the nation give their household and industrial detergents the characteristics that assure wide public acceptance and making it possible at competitive costs.

THE HYONIC FA SERIES forms a group of liquid detergent bases. Each product in the line has been well accepted in industry due to its versatility and proven efficiency. Although differing in chemical composition, each provides excellent all-purpose detergency . . . thick, rich foaming action . . . good wetting properties . . . good emulsification . . . finest performance.

THE HYONIC PE SERIES is a versatile group of octylphenol condensates. Their properties, determined

by their ethylene oxide molarity, offer the widest range of applications in the surface-active category. For example, one is a popular emulsifier and defoamer, one is an excellent high-foaming detergent. Others are all-purpose products, characterized by superior detergency, faster wetting, and greater foaming.

Because it makes and sells a complete line of surface-active chemicals, customers have in Nopco a single source of supply. This means important savings, too—in the form of quantity discounts and lower freightage.

Write today for full particulars and samples. And remember, Nopco chemists will be glad to help you solve your individual formulating problems. Call on them freely.



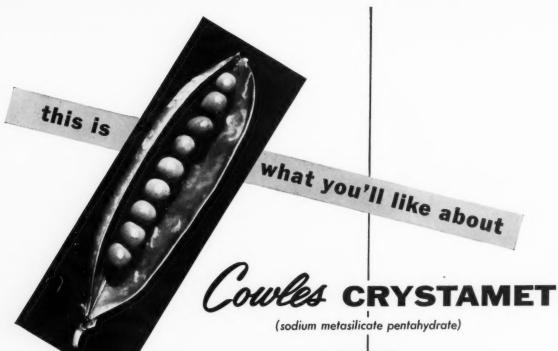
Write for the new Nopco bulletin, "A Guide to Preparing Household and Industrial Cleaning Compounds"



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Crystamet resists caking because particles are rounder and smoother. Note also in the magnified photos at right how Crystamet particles are far more uniform in size. This means Crystamet is virtually dust-free, another factor that makes Crystamet easier to handle, easier to mix and resistant to caking.

For a free sample of Crystamet 2040, or the coarser 1020 or finer 3080 grades, and a technical data sheet, just mail request on your company letterhead.

> "First real improvement in metasilicate in 25 years";









FULL-BODIED or FREE-FLOWING

# Nacconol are as good as they look!

And they look mighty good . . . whether you use NACCONOL 60S with its higher viscosity or NACCONOL SL with the flowability of water.

Both are homogeneous liquids with a pale-yellow color and a clean, fresh smell. They are clear and pourable even below  $32\,^{\circ}F$ .

Liquid NACCONOLS have excellent foaming, wetting and detergent action and are recommended for a wide variety of household and industrial cleaners. They're neutral, stable to strongly acid or alkaline aqueous solutions and are compatible with anionic and non-ionic materials.

Samples and data available

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Nacconol SW

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ALL-PURPOSE CLEANERS!
LAUNDRY DETERGENTS!
DISHWASHING COMPOUNDS!

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Made by the most experienced producer of phosphates, Westvaco TKPP is unexcelled for clarity and solubility. With fully integrated production coast-to-coast, Westvaco assures fast service and continuing ample supply in powder or granules . . . in bags, drums or bulk . . . or 60% solution. Mixed truckloads with other phosphates in our long line add extra convenience and economy.

In addition we offer expert technical assistance with product development and other problems . . . invaluable help that costs you nothing extra.

A qualified technical sales-service representative will be glad to discuss Westvaco TKPP or any of our products and services with you.

SODIUM PHOSPHATES Disodium Phosphate Hexaphos® Fosfodril® Sodaphos Monosodium Phosphate Sodium Acid Pyrophosphate Sodium Tripolyphosphate Tetrasodium Pyrophosphate Trisodium Phosphate Anhydrous Trisodium Phosphate Hemihydrate Trisodium Phosphate Monophydrate Potassium Phosphate Tripolyphosphate Tetrapotassium Pyrophosphate Tripotassium Phosphate Tripotassium Phosph



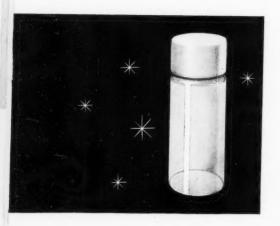
Putting Ideas to Work

FOOD MACHINERY AND CHEMICAL CORPORATION
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the new tone in musk odorants diffusive exalting powerful

A little extra everything ... except price



Emersol 233 LL Elaine, with its 5% maximum polyunsaturants content, is just a little better than other oleics in *many* critical performance characteristics. But together, these differences can add up to a significant improvement in your product performance—lighter color, blander odors, and unmatched resistance to deterioration by aging.

And, since Emersol 233 is competitively priced, it costs you no more to provide *your* products with these competitive edges at the sales level.

EMERSOL®
OLEIC ACIDS

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Carew Tower, Clasianati 2, Cl.ia

**Fatty Acid Sales Department** 

Vopcolene Division, Los Angeles-Emery Industries (Canada), London, Ontario

Industries, Inc.

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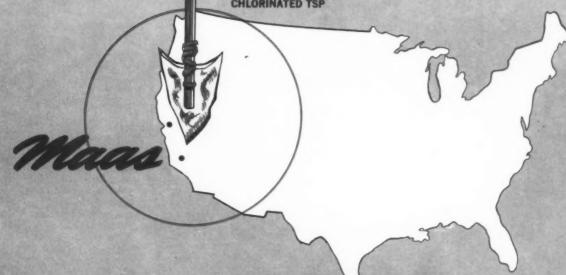
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Phosphates — Phosphoric Acids — Photochemicals — Questex (E.D.T.A.)

FASTER DELIVERY with two plants to serve you.
LESS WAREHOUSE SPACE because MAAS ships mixed truckloads.
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SODIUM CARBONATE
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SODIUM SULFITE
ACETIC ACID
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A. R. MAAS CHEMICAL CO.
Division of Victor Chemical Works
General Offices: South Gate, California
Plants: Richmond and South Gate, California



Turn Page for Phosfacts-Poly



# Pyro poly Which \ Phosphate to Use?

The ability of these phosphates to soften water, to hold metallic hardness ions in solution and to resolubilize precipitated hardness salts or sludge, make them useful in many applications. These unique properties may suggest new possibilities you will want to investigate.

#### SODIUM ACID PYROPHOSPHATE, ANHYDROUS (Na<sub>2</sub>H<sub>2</sub> P<sub>2</sub>O<sub>7</sub>)

Food grade acid pyro is the preferred acid phosphate for commercial baking powder, prepared cake mixes and doughnuts. Rate of reaction determines which of several types is best for a particular use. This acid salt is excellent for pH control in both food and industrial processes. Combined with wetting agents, a dilute solution of acid pyro makes an effective metal cleaner. The light phosphate coating produced on the metal surface by such cleansers provides a superior bond when paint is applied. Controlled pH and viscosity in drilling muds and clay slips without adding water is accomplished by adding carefully prescribed amounts of acid pyro.

#### TETRASODIUM PYROPHOSPHATE, ANHYDROUS (Na<sub>4</sub>P<sub>2</sub>O<sub>7</sub>)

TSPP owes its utility to outstanding dispersant and peptizing properties. An efficient dispersant for calcium, copper and iron, TSPP has exceptional magnesium repression values. More stable in solution than other polyphosphates, TSPP is used in textile finishing, boiling out of cotton; in steam cleaning and other industrial cleaning compounds. Stabilization of hydrogen peroxide bleaches, fluidity control of clay slurries and builder for soaps and detergents are important functions of this versatile pyrophosphate.

#### ARMOFOS-SODIUM TRIPOLYPHOSPHATE. ANHYDROUS (NasP3O10)

Comparable to TSPP in actual cleaning power, this milder polyphosphate salt has about twice the calcium sequestering value and equal magnesium repression power. It will complex more readily with metallic ions and will remove such impurities from organic fibers. More stable in hot solutions than glassy phosphates, tripoly is almost as powerful a water conditioner. As a detergent builder, water softener, deflocculant or, in general, tripoly offers the best value of all the polyphosphates.

#### VITRAFOS (SODIUM POLYPHOSPHATE GLASS) (63-64% P2Os)

The molecularly dehydrated, or glassy polyphosphates are the most powerful water treating phosphates in general use. Higher cost is often offset by unusual calcium sequestering ability. Soluble complexes with both Ca and Mg are formed at lower concentrations than with other polyphosphates. Primarily used in water treatment, Vitrafos has applications in food processing and in certain types of cleaning compounds. Like other glasses, Vitrafos has no true chemical formula but consists of a varying network of P-O-P chains. These chains give Vitrafos many of its beneficial properties.

#### PROPERTIES OF SODIUM PYRO AND POLYPHOSPHATES (TYPICAL VALUES)

FORMULA	SAPP Na <sub>2</sub> H <sub>2</sub> P <sub>2</sub> O <sub>7</sub>	TSPP Na <sub>4</sub> P <sub>2</sub> O <sub>7</sub>	STPP Na <sub>5</sub> P <sub>3</sub> O <sub>10</sub>	VITRAFOS (Glass) 63-64% P <sub>2</sub> 0, Glass network	
Mol. Wt.	221.97	266.0	367.9		
TYPE	Powder Fine Gran.	Powder Gran.	Powder Gran.	Gran.	
P <sub>2</sub> O <sub>5</sub>	63.0%	52.9%	57.7%	63-64%	
Solubility Range Lbs./gal. water 20 C.	1.55 @ 40°C 1.00 @ 20°C	3.40 @ 80°C 0.35 @ 20°C	2.0 @ 90°C 1.20 @ 25°C	Greater than 12.0	
pH of 1% soln. (Room Temp.)	4.2	10.2	9.7	7.8	
Grades	Food Proc. Tech.	Food Proc. Tech.	Food Proc. Tech.	Tech.	

Highly effective sequestrants, peptizers and deflocculants at normal temperatures, the pyro and polyphosphates revert to orthophosphates at elevated temperatures over widely varying periods of time. Sludging or precipitation can be prevented by further additions or by the adoption of a heat-time stable chelant. Should this be indicated, write for QUESTEX EDTA facts.



A. R. MAAS CHEMICAL CO. **Division of Victor Chemical Works** 

General Offices: South Gate, California Plants: Richmond and South Gate, California



## After Closing

#### **Mohr Heads Tintex**

Jack H. Mohr was elected president and a director last month of Tintex Co., a subsidiary of



Jack H. Mohr

Schenley Industries, Inc., New York. Mr. Mohr also was elected a director of another Schenley subsidiary, Park and Tilford Co.

With Schenley since 1957 when he joined the firm to be general manager of both operations, Mr. Mohr was formerly with the Lentheric division of Olin Mathieson Chemical Corp., New York. Prior to that he was associated with Richard Hudnut, Inc., New York.

#### **Aerosol Clinics Planned**

Plans are currently underway for two regional aerosol technical clinics, one in New York and the other in Chicago, which are tentatively scheduled to be held in October, it was announced early this month by Joseph J. Tomlinson of General Chemical division, Allied Chemical Corp., New York, and chairman of the program committee, Aerosol Division, Chemical Specialties Manufacturers Association. A proposal for the one day clinics submitted by the committee was approved by the division's executive committee at the CSMA

mid-year meeting in Chicago last month.

According to Mr. Tomlinson, the clinics will be designed for junior level management, operators, and technicians on a purely technical and non-commercial basis. Some of the subject matter will include aerosol marketing, marketing trends, and aerosol principles, with experts in the field speaking about such subjects as laboratory equipment and techniques, containers, valves, propellants and filling methods. A fee of approximately \$10 will probably be charged for attendance at the clinics to cover costs, Mr. Tomlinson stated.

A. H. Lawrence of E. I. du Pont de Nemours & Co., Wilmington, Del., has been appointed subcommittee chairman in charge of preliminary arrangements for the clinics.

#### **New Fels Executives**

Two new vice-presidents and three new directors were elected last month at the annual stockholders meeting of Fels & Co., Philadelphia. Max Brown, formerly national director of sales, is now vice-president—sales, and was reelected a director. Former plant manager Harry S. Hughes was

Max Brown



named vice-president-production.

The three new directors are Mr. Hughes; Joseph J. Greipp, treasurer; and Robert F. X. McRae, secretary. Cyril G. Fox, president, was re-elected to that position by the stockholders.

#### Colgate Appoints Two

Marion E. Thornton was named eastern area sales promotion manager of chain food stores and



Marion E. Thornton

Charles T. Hobgood was appointed to the comparable position in the western area last month for the toilet articles division of Colgate-Palmolive Co., New York. Mr. Thornton makes his headquarters in New York and is responsible for the sales and promotion of toiletry products through chain food stores in the company's Cleveland, Cincinnati, and New Orleans districts and all districts east to the Atlantic. Mr. Hobgood, who has headquarters in Chicago, is responsible for the Chicago, St. Louis, and Dallas districts and all districts west to the Pacific.

Joining the company in 1939 as a salesman in the soap department, Mr. Thornton became supervisor in the Atlanta toilet articles district in 1954. Most recently he served as chain food store supervisor in the Cleveland district.

Mr. Hobgood went with Colgate in 1946 and was advanced to supervisor of the Cincinnati district in 1954. Before his new appointment he was district manager of the Denver toilet article district.

#### **New Stalfort Filling Line**

Stalfort Pressure-Pak Corp., 321 W. Pratt St., Baltimore 1, Md., recently announced the operation of a high-speed, stainless steel filling line with a capacity of 120 units per minute. The line is said to be the first of its type east of the Mississippi River and has been designed specifically for packaging pressurized food products. Every movable part in the line that comes in contact with the food product can be dismantled and sterilized by scrubbing and flushing with a special germicide solution, Stalfort says. Sanitary conditions are maintained by having the filling line located in a segregated area enclosed by glass. Walls, ceilings, and floors are scrubbed and flushed with a sanitizing solution twice a day and operators are required to take precautionary measures for proper sanitary conditions.

Complete information and production details may be obtained by addressing Richard Kraus at the company.

#### **Alan Weatherburn Dies**

Alan S. Weatherburn, 46, associate research officer in the textile research section, division of applied chemistry, National Research Council of Canada, Ottawa, died of a heart attack May 16th. With NRC since 1940, Mr. Weatherburn had worked in the detergent field, especially with respect to the mechanism of action of detergent systems in removing soil from textile fibres. He was the author of many published articles in these fields, and was responsible for the section's research program in the detergency field. A member of the Chemical Institute of Canada, he is survived by his wife and two children.

#### **Emery Office Moves**

The Chicago office of Emery Industries, Inc., Cincinnati, was moved recently to new quarters at 6835 West Higgins Ave., Chicago 31. The new telephone number is Rodney 3-5747. Emery's warehous-



Overall view of new Stalfort pressure packaging food unit.

ing operation in Chicago remains unchanged.

Making their headquarters at the new office are Joseph E. Quinty and Paul N. Leech, sales representatives for the organic chemical and fatty acid sales departments, respectively, who cover the five-state territory around Chicago.

Philip Meshberg, president of Emson Research Laboratories, Bridgeport, about to take off on Pan American jet plane for four weeks' business trip through Italy, Germany, Switzerland, Holland, France and England.



#### Brockway, Tygart Merge

A proposed merger between Brockway Glass Co., Brockway, Pa., and Tygart Valley Glass Co., Washington, Pa., has been approved by the stockholders of both companies, it was announced early this month in a joint statement by Glenn A. Mengle, Brockway chairman, Finley B. Hess, Brockway president, and O. C. Noble, Tygart president.

Tygart will now be operated as a wholly-owned subsidiary of the Brockway firm. Transfer of ownership was negotiated on a stock dollar for dollar arrangement with no additional cash amount involved. Common and preferred stocks will be exchanged in proportion to the ratio held by Brockway stockholders. The U. S. Treasury Department already has ruled that the merger is tax free.

Combined net sales of the two companies for 1958 were about \$46 million and income was \$2.5 million. As a result of the merger Brockway becomes the fourth largest glass container manufacturer in the United States in sales volume.

Under terms of the consolidation Tygart management personnel remain in their present capacities for approximately three years. No personnel changes have been contemplated except to add a Tygart representative to the Brockway board.

Meanwhile Brockway announced the death of Robert L. Warren, Sr., former president and board chairman, who died May 26th at the age of 70. Mr. Warren had served as chairman from 1949 until his retirement in 1954. For the previous 21 years he had been president of the company and of its predecessor, Brockway Sales Co.

#### Film on Pyrethrum

First public showing of a 22-minute, sound-color motion picture of the pyrethrum-growing areas of the Equatorial Highlands (Kenya) in British East Africa and the Belgian Congo, took place in New York May 14.

Sponsor of the 16 mm film are the pyrethrum growers of Africa, who are making this film available free for public-service channels on television and for showings before adult groups.

Entitled, "The Pyrethrum Story", the film shows harvesting and processing of flowers, as well as plant scenes of the production of the concentrated base material.

#### Swiss Group to Meet

The Swiss Cosmetic Association has arranged for the 13th International Congress of Beauty Culture and Cosmetology to be held in Lucerne, Switzerland, Sept. 14-17.

#### **Armour Price Reduction**

A reduction in the price of its tertiary amines was announced last month by Armour Chemical Division, Chicago, following the completion of new production facilities at the company's McCook, Ill., plant. Prices have been reduced from 13 to 25 cents a pound, according to M. E. Lewis, Division general manager. Because of the new facilities and a new process the tertiary amines are now available in tank car quantities where previously they were offered only in limited amounts.

#### Lestoil's 25th Birthday Gift: New Plant

A WEEK-long open house marked a double celebration for Adell Chemical Co., Holyoke, Mass., manufacturer of "Lestoil" cleaner. Held during the week of May 18th, host for the event was Joseph L. Barowsky, founder and president of Adell, which celebrated the 25th anniversary of its founding, as well as marking the completion of the new 150,000 square foot building where the cleaner is manufactured.

The first day of the open house featured several ceremonies, including numerous awards to Mr. Barowsky. On this day, too the new 90,000 square foot addition to the Adell plant was formally dedicated. The affair marked the completion of the building program commenced in 1957. The completed one story plant has six production lines, two railroad sidings for receiving raw materials and bottles, and a new 12 bays truck loading dock to accommodate an average of 35 trucks per eight-hour day. Other plant equipment includes 33 20,000 gallon tanks and one 10,000 gallon storage tank in a new tank room which now gives

the company a total storage capactiy of one million gallons. The production capacity of the new plant is 100 million bottles per year based on an eight-hour day.

Among the awards presented to Mr. Barowsky during the ceremonies held on May 18 was the Massachusetts Department of Commerce Special Achievement Award. Presented to Mr. Barowsky by Commissioner John T. Burke, the award has been given to only two other Massachusetts citizens.

Television station WHYN-TV of Holyoke, the first of 229 stations to carry "Lestoil" advertising presented a special award to Mr. Barowsky. Charles DeRose made the presentation.

Television station WBNS-TV of Columbus, Ohio, presented Mr. Barowsky with a "Buckeye" tree, the official tree of Ohio. The presentation was made by Robert Thomas, director of sales for the station who also read a letter from Ohio Governor Michael DiSalle congratulating Mr. Barowsky.

Dr. A. L. Wishart, president of Knox Glass Co., Knox, Pa., presented Mr. Barowsky with an in-

Commissioner John T. Burke, left, Massachusetts Department of Commerce, presents Jacob L. Barowsky, president of Adell Chemical Co., Holyoke, Mass., with the department's special achievement award at ceremonies marking the firm's 25th anniversary celebration. Picture in background is artist's drawing of company's new 150.000 square foot plant.



scribed sterling silver "Lestoil" bottle. The presentation was made jointly by Feldman Glass Co., agents for Knox Glass Associates, Inc., and Knox.

Mayor Samuel Resnic welcomed the guests at the open house to the city of Holyoke and acted as official representative from "Lestoil's" home town. Mr. Resnic presented a plaque from the city to Mr. Barowsky.

Master of ceremonies for the dedication ceremonies for the new addition to the plant was Robert Barrett, president of Holyoke Water Power Co. Speaking at the dedication ceremony was Lt. Governor Robert F. Murphy of Massachusetts.

Guided tours through the new facilities were given between 10 AM and 5 PM during which time guests were shown the entire manufacturing operation in the production of "Lestoil". Buffet luncheons were served from 11 AM until 2 PM, and silvered bottles of "Lestoil" were presented to all guests attending the open house. The first three days of the celebration were for invited guests, May 21 was set aside for employees and their families and May 22 was open to the public.

Adell Chemical manufactures a line of chemical specialties which includes "Lestoil" packaged in pint and quart bottles, one-half and one gallon cans for the home and in pails and drums up to 55 gallons for industrial and institutional use. "Lestoil" is also packaged as a waterless hand cleaner.

#### **New Antara Distributor**

- \*-

Bulk quantities and drum stocks of "Igepal" CO- and CA-surfactants and "Cheelox" sequestering agents from Antara Chemicals sales division of General Aniline & Film Corp., New York, are now being distributed in Texas, Oklahoma, and western Louisiana by Texas Solvents & Chemicals Co. Texas Solvents was recently appointed distributor in that area. The products are warehoused in Houston and Dallas, Tex.

#### Jobbers to Sell Injector

The "Minipump Rinse Injector" manufactured by Minipump Corp., Phoenix, Ariz., is now



being sold through distributors, it was announced early this month by E. F. Ziegler, president. Previously the unit was marketed exclusively through The J. B. Ford Division of Wyandotte Chemicals Corp., Wyandotte, Mich.

The injector is a control instrument for maintaining correct rinse booster concentration in dishwashing machines. It is said to maintain correct concentrations regardless of the amount of pressure on the line, without clogging or stopping. According to the company, the device is a precision pump action injector and has a cast aluminum case with large reservoir and a by-pass tube to measure the exact amount of additive used.

#### Zep Expands at Two Plants

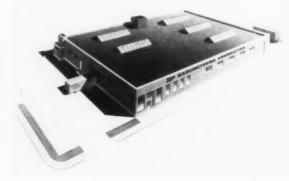
**Z**<sup>EP</sup> Manufacturing Corp., Atlanta, Ga., recently announced a manufacturing center, a research and development laboratory, ware-

house facilities, and an office building are under construction on a ten-acre tract in Atlanta's Chatanooga Industrial district. At the same time the firm announced its move early this month into a new 25,000 square foot building in the North Kansas City industrial district as an expansion of its Kansas City, Mo., facilities.

The new Atlanta plant will have over 150,000 square feet of floor space and will be served by the Seaboard Railway. Completion is scheduled for the fall of the year. According to the company the latest in material handling, mixing, and formulating equipment will be incorporated into the new structure and two outside tank farms alone will provide more than 250,000 gallons liquid storage capacity.

Late last month Zep suffered a five alarm fire which destroved its office building and warehouse at 560 Edgewood Ave., N. E., Atlanta. Firemen attributed the blaze to a faulty electrical panel. Zep had sold the 60,000 square foot building last December and was occupying it until completion of the new facilities in Atlanta. A complete line of janitor supplies, including acrosol products and floor machines were in the building. Early estimates indicated an inventory loss of \$200,000 but approximately \$40,000 worth of merchandise in a back shed was saved. Temporary headquarters were established in a nearby office building with the aid of the company's suppliers and competitors.

New, 25,000 square feet plant of Zep M a n u f a c turing Co., Atlanta, in North Kansas City.

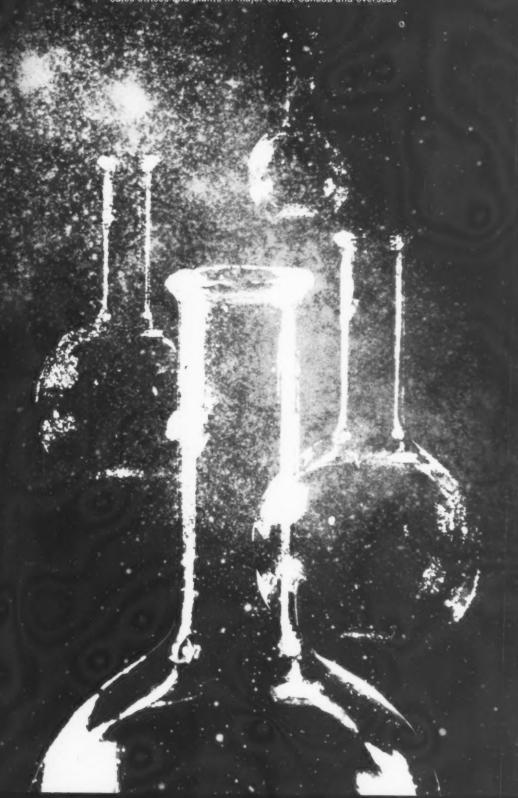


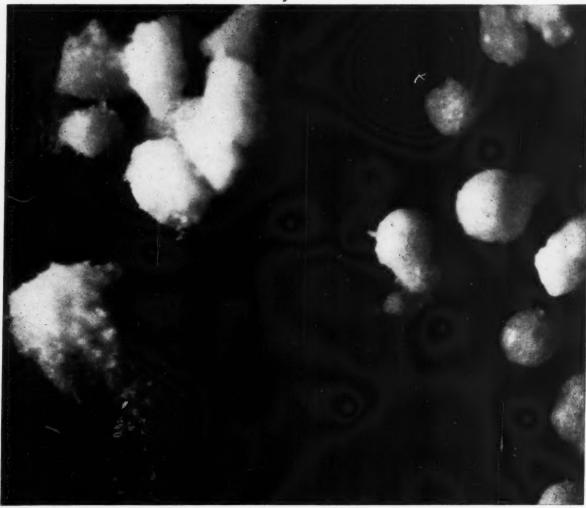
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Photomicrograph shows amazing bulking power of a granule of spraydried phosphate (left) when compared with conventional form (right).

#### Photomicrograph shows how to add 30% more bulk to detergents with spray-dried phosphates

The phosphate on the left is spraydried. It's 70% bulkier than the conventional phosphate on the right.

Add this bulking power to your detergent and you come up with a package that's 20% to 30% larger without adding to your cost a whit.

Two spray-dried phosphates. You can get both sodium tripolyphosphate

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The spray-dried phosphates dissolve two to three times faster than conventional forms, because of their greater surface area. They are 97% to 99% pure—highest standards anywhere.

The high air content of spray-dried

phosphates keeps them loose and freeflowing at all times.

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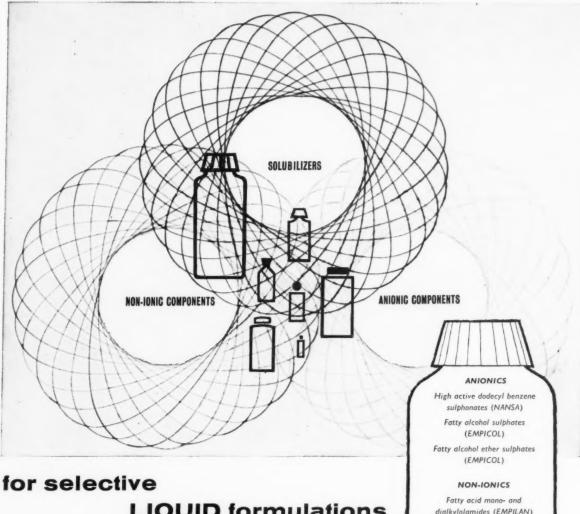
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Polyethanoxy ethers of fatty acid monoalkylolamides (EMPILAN)

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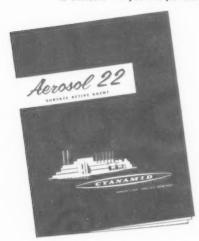


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This multimillion dollar modernization and expansion and our strategic location at South Charleston, West Va., makes Westvaco more than ever a desirable source of supply. Can we quote on a fair share of your alkali needs?

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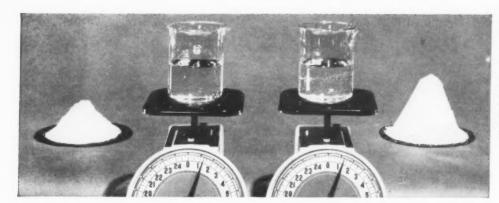
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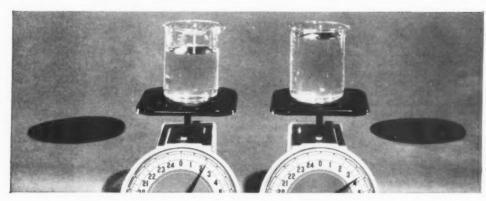
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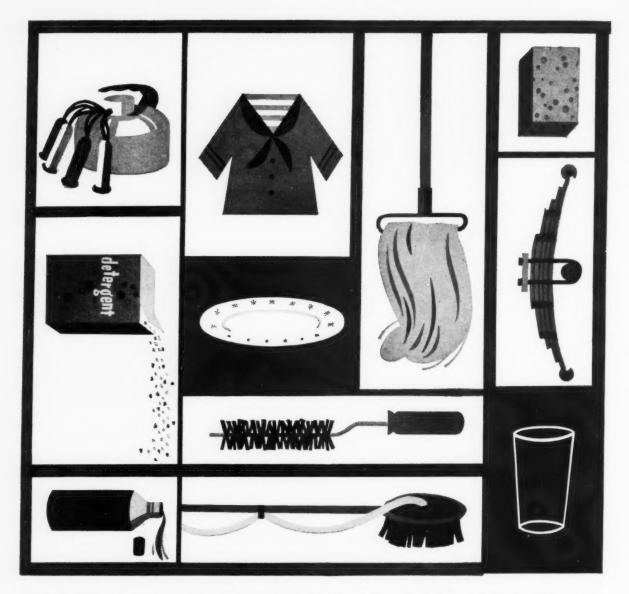
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TRITON X-100 is one of the most versatile non-ionic surfactants ever developed. Nothing can touch it for overall efficiency as a detergent and for preventing soil redeposition on cleaned surfaces. Today, you find it in liquid and powdered detergents for dish washing and laundering, scrub detergents, car washing compounds, dairy detergents, metal cleaners, and many other cleaning compounds. TRITON X-100 is compatible with alkaline builders, other surfactants and with sanitizers such as HYAMINE 3500, the new "hard water" quaternary germicide. In "use" concentrations it is non-toxic... and best of all, a little goes a long way in your liquid or powdered formulations.



Chemicals for Industry

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## TRITON X-100

## ... in brief

#### as the editor sees it . . .

STILETTO HEELS.... Current fashion in ladies shoes calls for heels with a contact surface area of about a quarter-inch square. That such shoes are in a class with hobnail boots in defacing resilient floors is quite obvious. Floor experts contend that these ladies' heels give a static load of about 4,000 pounds per square inch and a dynamic load when a person is walking of much more. Now, rubber tile will withstand loads of up to 1,000 pounds per square inch for short periods. So it seems quite apparent that permanent indentation and damage to soft floors is inevitable when milady walks upon them with her "stiletto heels."

Screams to wax and floor finish suppliers, we fear, will do no good. The floor finish manufacturer is just a plain manufacturer, not a magician. Maintenance people who are in the habit of having their wax suppliers pull a rabbit out of a hat in the past are due for a disappointment this time. The floor is ruined. The owner, can either replace it with cement or make the ladies remove their shoes upon entering the premises. Anybody who plans on the latter procedure, please let us know. We'll have a photographer in attendance. Also ointment and bandages.

PRIVATE BRAND . . . . Some of the larger food chains are in the throes of pushing the sale of their own private brand detergents, liquids and otherwise, but mostly liquids. And they are pushing them at what seem to be unreasonably low prices. In some areas, this is playing hobbs with the sale of nationally advertised products. At an even price or even at a slightly higher price, the national brands might provide a real competitive battle, but with the private brands priced so low, the advertised goods have really a tough row to hoe.

In some instances, private brand liquids are being sold at prices which vary all the way from 40 per cent to 70 per cent under the nationally advertised brands. Twelve ounce cans of national brand liquids bring 40-42 cents in the stores, 22 ounce cans 75-77 cents. The same relative packages of private brand liquids sell for 23-24 cents and 43-44 cents. The price span is so great that the average housewife either cannot pass it by or she must conclude that there is something wrong with a product which sells so cheaply.

So far this bitter private brand competition has been most in evidence on the Pacific Coast and other parts of the West. But marketers feel that it is merely a question of time when it can become country wide, the toughest competitive problem liquid detergents have yet encountered.

AEROSOL SURVEY . . . . Production of non-food pressure packaged products in 1958 total 470,000,000 units, according to the figures issued by the Chemical Specialties Manufacturers Association. This compares with 390,000,000 units in 1957 and 320,000,000 units in 1956. All figures are projected estimates made by the Aerosol Survey Committee of CSMA. It is estimated that the retail value of these pressure packages averaged one dollar per unit. Actual figures reported for 1958 were 341,383,496 units and for 1957, 339,490,802 units. The higher projected figures allow for production of non-reporting companies.

Hair sprays again topped the aerosol list for 1958. The Survey Committee estimates that the output was well in excess of 100 million units, a gain of 20 per cent over 1957. Insect sprays and shave lather showed figures slightly under room deodorants, but the committee stated that it believed 1958 production of all three groups was in excess of 60 million units each. Dental

## Specialties FROM HAARMANN & REIMER

LILAC 9830 W.O.J. For many years a world renowned Lilac. Now offered in its original form in a colorless type. One of the most outstanding raw materials at the disposal of the perfumer. For creams, perfumes, lotions. Ask for samples and prices — you will be delighted with the result.

NEROFLOR EXTRA To produce the odor value of Oil Neroli Bigarade Petale.

NEROFLOR SAVON Possesses the same merits—stable in soaps, recommended for low priced purposes.

MUGOFLOR A new chemical of remarkable blending qualities of great value to the perfume compounder.

AGRUMEN ALDEHYDE Refines the fresh green note, but also the characteristic note common to all Citrus Oils.

#### **VERONA SPECIALTIES**

CYCLAMAL EXTRA The standard of comparison for this widely used chemical.

**VERONOL** An Aldehyde of great power to use for top note and to harmonize odor characteristics of a perfume. Very stable.

FLORANOL An Ester of fresh Apricot fruitiness of interest in Rose compositions.

PARA CRESYL CAPRYLATE A stable Jasmin ingredient.

ISO AMYL BENZYL ETHER A low priced fruity-floral base of value in Jasmin and Gardenia.



SPECIALTIES BY J & E SOZIO, Grasse, France

ROSE HB A special natural rose base processed by extraction from flowers other than Rose de Mai.

ROSE HM The same with Rose de Mai.

**CHENIRAX** An extraction of Mousse de Chene and Gum Styrax.

IRIS ED 205 An interesting and economical Iris body distilled over Orris Roots.

DISTRIS A natural product distilled over Iris Roots.

DISTIRONE A reconstitution of Absolute Iris (Irone) distilled over Iris Roots.

You are invited to send for samples of any specialties that interest you.

VERONA

VERONA AROMATICS

A DIVISION OF VERONA-PHARMA CHEMICAL CORP.

Plant and Main Office:

26 VERONA AVENUE, NEWARK 4, N. J. 1210 ROSEDALE AVENUE, CHICAGO, ILL. creams showed a reported figure of about 13 million, believed to be under the actual output.

As far as can be determined from the projected figures, all aerosol groups showed a production gain in 1958 over 1957. But the absence of the figures of non-reporting companies compels the committee to speculate in determining totals. There seems to be no other way to fill the gap.

SALES.... Sales of detergents and soaps for the first quarter of 1959, according to the figures of the Soap Association, follow pretty much the pattern of the past two years. Total sales are up one-half per cent compared to 1958. Detergent sales are up 4.6 per cent, soap sales off 9.7 per cent. Liquid detergents continue to bound upwards, showing a 14.2 per cent gain over the comparable quarter of 1958. The share of the over-all market commanded by synthetics is still edging upward and passed the 75 per cent figure for the first quarter. Last year, the figure was 72.3 per cent.

An outstanding exception to previous market trends during the initial quarter of this year were toilet soaps. For the first time in several years, sales showed a decline, a drop of 9.8 per cent. This we are inclined to question. It conceivably could be due to a change in classification starting with the fourth quarter of 1958 involving the inclusion of synthetic bars, medicinal soaps, etc. About half of all soap sold today is toilet soap.

The high level of detergent and soap sales today, we feel, continues to reflect high total wages. Soap sales have always been an excellent reflector of economic conditions, not only in America, but everywhere. But even on a static economic level, soap and detergent sales tend to creep upward.

NON-SKID . . . . The new rubber-tile floor in the Senate office building in Washington has really caused a hubbub in the newspapers. It seems the floor was slippery and the Capitol architect plans to cover it with \$150,000 worth of carpet. Not only that, but 600 doors of senate offices will have to be trimmed a half inch so they will close over the carpet. More expense. This was just too much for Senators Paul Douglas and William Proxmire.

In spite of the fact that the carpet money had already been voted, these two crusading senators rushed to the fore with a few cans of non-skid wax and a buffing machine. Midst kleig lights, janitors, secretaries, television cameras and general confusion, our two heroes proceeded to wax the floor while four well-known wax manufacturers stood by jealously watching the application of their products. The two senators did what a few observers stated was a real expert job of floor waxing.

When the job was done, a couple of secretaries were invited to walk on the newly waxed surface. They deliberately tried to skid. No skid. In fact, one young lady said, "I can't skid. It's sticky." And Senator Douglas with gestures appropriate to a Senator on television stated, "A great blow for economy!" And the four wax manufacturers all shook hands and smiled. What they were smiling about we'll never know. We hear that the floor will be carpeted anyway.

\* \* \* \* \* \*

SHAVERS... The electric shaver, that bogey calculated to scare the pants off the average shave cream manufacturer, has not been doing so well of late, according to news reports. Marketwise, electric shavers have been having their troubles. Sales were down four per cent in 1957 and another four per cent in 1958. Prices per razor have been cut something like twenty-nine per cent by manufacturers, but that is really nothing to what retailers have been doing to prices during the past couple of years. Retail price wars have plagued shaver sales.

Out of this "jungle market" in shavers, a leading manufacturer has taken drastic action, firing all his wholesalers and taking over his own distribution. Others have been getting tough about advertising allowances and refusing any further trade-ins on old razors. It seems that manufacturers combined had a warehouse full of old shavers which they didn't know what to do with. And the retailers have yet to be heard from. Many of them have been taking it on the chin also. All told, it's been a rather sour pot of porridge.

In the meantime, sales of shave cream and lather continue on an even keel, or even a little better. Didn't somebody mention a few years ago that shave cream was a dead duck?



Inside, outside,

all around the building...

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It's like having extra help on the cleaning force when you put Atlantic ULTRAWETS to work on factory and institutional clean-up jobs.

ULTRAWET 60L is a superior liquid alkyl aryl sulfonate that works well in hot or cold water, hard or soft water. It increases the efficiency of floor scrubbing, heavy-duty liquids and hard surface cleaners as well as liquid sanitizers...emulsifies grease, speeds soil removal, keeps solids in uniform suspension and leaves no soap scum.

Leading compounders find that ULTRAWET 60L provides uniform high quality and flexibility in the formulation of all-purpose liquid cleaners. In scrub soap formulations it allows the use of a higher phosphate content with resulting clear solutions. Furthermore, it provides excellent controlled pH of alkalinity.

The ULTRAWET product advantages add up to sales advantages for you. Atlantic ULTRAWETS are available in flake, bead and liquid form. For even greater economy, deliveries can be made in bulk shipments.

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#### as the reader sees it . . .

#### Pine Oil Sanitizers

Editor:

Clarification of a number of points in the article, "Sanitizers Based on Pine Oil," by Ibert Mellan and Irwin I. Lubowe would seem to be desirable. This article appeared in the April, 1959 issue of Soap & Chemical Specialties beginning on page 74. The writer would like to make the following comments.

In the tables on page 79 the concentrations in the formulation are not given for "Hexachlorophene," "Thiuram," "Vancide," "Chloro-o-phenylphenol" and "Chloro-o-phenol." The term "thiuram" properly refers to the thiocarbamyl group (H2NCS-). If the authors intended to indicate the compound, tetramethylthiuram disulfide, then the common name, THIRAM, should have been used.

"Vancide" is a registered trade mark and should not be used as a common word. Furthermore, there are a number of "Vancides" commercially available and marketed under number or letter designations. The authors failed to indicate the nature of "Vancide" in any way either by number, letter or chemical identity.

Results in the tables are given in terms of zone of inhibition. There is no reference to the test method used, and without knowing the method, it is difficult to estimate the significance of the results. The writer fails to see that any synergistic effects have been demonstrated.

In Table IV. Chloro-ophenol is mentioned. In Table V, the heading includes "Chloro-ophenol." Did the authors mean to say o-chlorophenol or Chloro-ophenylphenol in Table V?

> K. S. Karsten, Manager, Vancide Department, R. T. Vanderbilt Co. New York City

At the top of the third column on page 79, and above the table giving data on "Vancide" the word "Vancide" appears in quotes, to indicate it is a registered trade name. Following the name are two asterisks which refer to a footnote which gives the name and city in which the owner of the trade mark is located. Thiuram, hexachlorophene, chloro-o-phenylphenol and chloro-o-phenol are generic terms and so were not capitalized and placed in quotation marks.

We have asked the authors of the article to answer Mr. Karsten's other questions. Ed.

#### ----Resistance Test Reprints Editor:

We would like to have for our library two copies of the Textile Resistance Test published on

page 111 et seq. of the May 1959 issue of Soap & Chemical Specialties. This could be in the form of tear sheets-or we will be glad to write directly to the Chemical Specialties Manufacturers Association if you will provide the address.

A. J. Kelly

Burkart-Schier Chemical Co. Chattanooga, Tenn.

Reprints of the test which appeared in full in the May issue of Soap and Chemical Specialties will be available shortly either from us or from the Chemical Specialties Manufacturers Association at 50 East 41st Street, New York 16. Ed.

#### **New Aromatic Fragrance**

A new lemon fragrance called "Lemonal A. P." was introduced recently by Aromatic Products, Inc., New York, for use in soaps, detergents, and chemical specialty items. Price in five pound lots is \$2.00 per pound. A one pound trial quantity at the five pound price may be ordered from the company, 235 Fourth Avenue.

John A. Rodda, manager of Fairfield Chemicals, Food Machinery and Chemical Corp., New York, about to board an American Airlines "707" jet plane at International Airport, Queens, N. Y., early in May, on the first leg of a business trip which took him to the Far East and Europe. The month's trip, from which he returned recently, took him to Japan and then England where he surveyed market conditions. Mr. Rodda, who is chairman of the executive board of the Insecticide Division of Chemical Specialties Manufacturers Association, spoke with government health officials, insect control experts and insecticide manufacturers in the countries he visited.



### From PROCTER & GAMBLE... a complete catalog of versatile formulation products for your every soap or detergent need!

A neutral nonionic synthetic detergent of the 100% alkyl-phenol ethylene oxide condensate type. A light-colored

liquid with a clean, pleasant odor. Its superior detergent, wetting and emulsifying properties offer excellent performance in liquid detergents, sanitizer detergents, self emulsifying solvents, laundry detergents, glass, textile and dairy cleaners, insecticides and bottle washing compounds.

AMBER GRANULES. A neutral 88%, 42° titer-type soap of exceptional purity and uniformity. Well suited for

the preparation of paste or gel-like products because of its high titer. Its granular form makes it ideal for powdered products. Excellent for the preparation of hand cleaners, paste cleaners, polishes, lubricants and coatings.

ES PASTE. A specially developed synthetic detergent whose active ingredient is mainly modified alkyl sulphate. Offers exceptional efficiency and

stability over a wide range of operating conditions. Wetting, penetrating, sudsing, dispersing and emulsifying properties make it excellent for the preparation of liquid shampoos, bubble baths, liquid detergents, liquid floor cleaners, insecticides, car washes, emulsion

AB GRANULES. A neutral synthetic detergent, wetting and emulsi-

fying agent of the 40% active sodium alkyl aryl sulphonate type. A white product that can be used effectively in the blending of bubble baths, car washes, dishwashing compounds, dairy cleaners, insecticides, laundry detergents, rug and upholstery cleaners.

WA PASTE. A neutral synthetic detergent and wetting agent whose active ingredient is mainly sodium alkyl sul-

phate. Excellent sudsing, wetting, dis-persing and penetrating properties. Ideal for paste and liquid shampoos, bubble baths, liquid detergents, liquid car washes, liquid floor cleaners, insecticides, glass cleaners, rug and upholstery cleaners.



IVORY BEADS. A medium titer, neutral white soap of exceptional purity and quality. Well suited for compounding products where a mild but effective

soap is required—hand soaps, polishes, protective creams, dishwashing compounds and paper coatings.



K LIQUID. A modified, highly concentrated ammonium lauryl sulphate
-modified for increased sudsing and

mildness. Exceptionally low cloud and pour points. Highly fluid and easy to handle. Ideal for clear liquid shampoos and liquid detergents where high foaming is required.

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# Detergents... Cleansers...

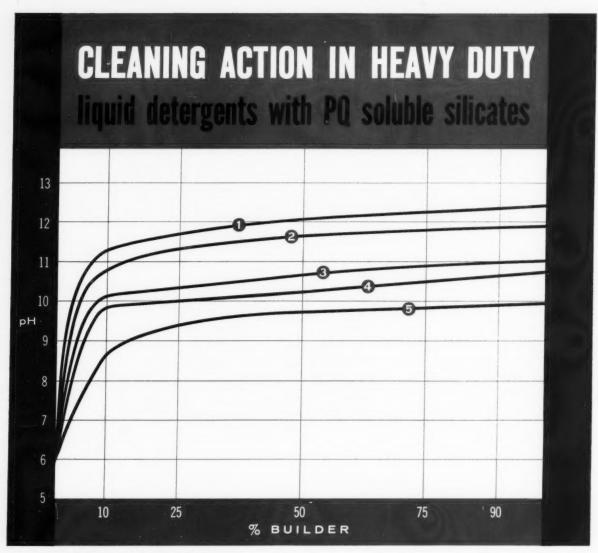
Soaps

Savery F. Coneybear (right) of Colgate-Palmolive Co., New York, and president of the Society of Cosmetic Chemists, presents annual Special Award of the Society to Dr. Irwin H. Blank, eminent dermatologist and biochemist. Presentation was made at Special Award luncheon during SCC meeting.

Aerosols **Detergents Dishwashing Compounds** Floor scrubs Glycerine Hand cleaners Laundry soaps Liquid soaps Metal cleaners Potash soaps Scouring cleansers Shampoos Shave products Soap powders Starch Steam cleaners Medicinal soaps Textile detergents **Toiletries** Toilet soaps and other detergent

and soap products





pH at 25° C. of 0.2% Synthetic Detergent-Builder Mixtures in 50 P. P. M. Hard Water

- 1 Caustic
- Metso Granular, sodium metasilicate pentahydrate Molecular Ratio 1:1
- C Sodium Silicate 59° Baume Ratio %Na<sub>2</sub>0:%Si0<sub>2</sub>, 1:2.0
- M Sodium Silicate 41° Baume Ratio %Na20:%Si02, 1:3.22
- 6 Pyrophosphate

For liquid detergents, the PQ soluble silicates supply high cleaning activity for stubborn soils. They quickly break up grease, oils and fats and suspend the soil until rinsed away. The buffering property of the silicates holds the solution at a sustained pH for effective cleaning.

PQ silicate is indeed an efficient builder, performing all features of detergency economically—emulsification, saponification, deflocculation, suspension and prevention of redeposition of soil.

No wonder more and more synthetic detergents are built with PQ soluble silicates.

PQ SOLUBLE SILICATES
SODIUM SILICATES POTASSIUM SILICATES



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Associates: Philadelphia Quartz Co. of Calif. Berkeley & Los Angeles, Calif., Tacoma, Wash.; National Silicates Limited, Toronto, Canada Distributors in over 65 cities.

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## Surfactant Marketing Trends

#### By Ralph Macon\*,

Market and Product Development Manager, Chemical Division, Atlantic Refining Co., Philadelphia

N January 1955, at the annual meeting of the Association of American Soap and Glycerine Producers, the past and then current markets and future trends of surfactants or organic synthetic detergents were presented.

At this time essentially the same market history will be presented, along with the current market status, a comparison of the projections made in 1955 with actual performance during the past five years, and another look into the crystal ball in an attempt to visualize what the surfactant market will be in the period 1959-1965.

For the purposes of this paper certain non-applicable classifications as reported in the U. S. Tariff Commission report on surfactants have been eliminated. For example, in 1957 the non-applicable quantity amounts to 215.6 million pounds so that the adjusted volume is 990.3 million pounds. This paper is a discussion of the adjusted volumes and the markets they represent.

As you all know one of the old reliable tools of market research is the well known Gompertz curve, which is used for the purpose of fitting certain patterns of growth. It is a double exponential and is expressed by the equation y=abc<sup>x</sup>. The Gompertz curve may predict and reflect the various stages of growth of a given type of product through its entire history, during the periods of (a) intro-

duction, (b) market development, (c) commercial acceptance, and (d) market maturity.

Surfactants are an outstanding example of the growth pattern indicated by the Gompertz curve. This is shown rather clearly when the data in Table 9 are plotted.

How did this growth pattern develop? Synthetic detergents derived from petroleum raw materials first emerged as a poor competitor for the soaps produced from vegetable and animals fats and oils about 25-30 years ago.

The challenge of synthetic

Table 9. U.S. Total Soap and Synthetic Sales 1935-1958, Projections to 1965

(Millions of pounds, as sold)

Year	Total	Soap	Synthetic	Percent Synthetic of Total
1935	2,778	2,776	2	0.07
1936	2,046	3.041	5	0.16
1937	2,958	2,948	10	0.34
1938	3.141	3,126	15	0.48
1939	3,324	3,306	18	0.54
1940	3,236	3,206	30	0.93
1941	,3,842	3,802	40	1.04
1942	3,639	3.589	50	1.37
1943	3,540	3.465	75	2.12
1944	4,215	4,060	125	2,97
1945	3.724	3,574	150	4.04
1946	3,203	2,928	275	8.60
1947	3.952	3,552	400	10.10
1948	2,919	2,517	402	13.8
1949	3.200	2.488	712	22.2
1950	3,578	2,485	1,093	30.6
1951	3.312	2,057	1,255	37.9
1952	3,400	1,870	1,530	45.0
1953	3.512	1,645	1,867	53.2
1954	3,507	1.444	2.063	58.9
1955	3.668	1.351	2.317	63.1
1956	3.975	1,285	2,690	67.7
1957	4.105	1,189	2,916	71.0
1958	4.089	1,138	2,951	72.2
1959	4,255	1,126	3,129	73.5
1960	4,325	1.082	3,243	75.0
1961	4.480	1.077	3,403	76.0
1962	4,545	1,048	3,497	77.0
1963	4.605	1,014	3,591	78.0
1964	4,615	975	3,640	79.0
1965	4,700	940	3.760	80.0

Sources: 1935-1958—Association of American Soap & Glycerine Producers (Sales by members).

1958-1965—Estimates.

<sup>\*</sup>Paper presented before annual meeting of the Chemical Market Research Association, New York, May 21, 1959.

detergents to soap supremacy as a cleansing agent began on a very modest scale. In 1935 the sales of soaps totaled 2,776,000,000 pounds, as compared with a sales total of synthetic detergents of only 2,000,000 pounds on an as sold basis (Table 9).

But this beachhead was expanded into a full-scale invasion of the market. Ten years later, in 1945 the sales of soap totaled \$3,574,000,000 pounds, while the total synthetic detergent sales, although still far behind, had zoomed to 150,000,000 pounds, triggered by the wartime shortage of fats and oils.

In 1953, for the first time, the total sales of synthetic detergents eclipsed those of soap products as the economy and performance of these petrochemical and chemical derivatives were exploited by the industry. In that year, soap sales dropped to 1,645,000,000 pounds, and synthetic detergents reached a new high in total sales of 1,867,000,000 pounds. In 1958 synthetics established supremacy with sales reaching 2,951,000,000 pounds and soaps dropped to 1,138,000,000 pounds.

Now, consider the motion within this market. Synthetic detergent sales, of course are divided into two main categories: solids and liquids. Solid synthetics have represented by far the major portion of total sales to date. Liquid sales, however, have been increasing rapidly both on an absolute basis and as a percentage of total detergent sales. It is noted from Table 1, that in 1948, liquid detergent sales were negligible. In 1950, about 22.6 million pounds of liquids were sold and this amount represented a little over two per cent of total volume synthetic detergent sales. By 1958 sales of liquids increased more than nineteen fold to 430.7 million pounds and made up 14.6 per cent of total volume of sales.

The largest single surfactant in volume of the five major categories of organic synthetic ingredients is the alkyl aryl sulfonates. As indicated in Table 2,

Table 1. U. S. Total Solid and Liquid Synthetic Detergent Sales 1948-1958

(Millions	-4	Danmala	20	Cald	Ragio)
( IVIIIIIONS	OI	Pounds	as	Pold	Dasis

Year	Total	Solid	Liquid	Liquid as Percent of Total
1948	402	-401	7.1	Negligible
1949	702	1,702	10.3	1.45
1950	1,093	1,071	22.6	2.06
1951	1,255	1,217	38.2	3.04
1952	1,530	1,481	49.6	3.24
1953	1,867	1,782	84.6	4.52
1954	2,063	1,944	118.7	5.80
1955	2,317	2,164	153.0	6.60
1956	2,690	2,430	259.6	9.70
1957	2.916	2,552	363.5	12.50
1958	2,951	2,520	430.7	14.60

DATA: Assn. Amer. Soap & Glycerine Producers, Inc. (Sales by Members)

an analysis of United States Tariff Commission production figures for 1957 shows that out of a production of 990,300,000 pounds of 100 per cent active organic detergents in that year, there were produced a total of 472,300,000 pounds of alkyl aryl sulfonates—or about 48 per cent. In 1958 it is estimated 1,040,000,000 pounds of synthetics were produced. During the same

period alkyl aryl sulfonate production is estimated at 485 million pounds or about 46.6% of the total.

This relationship has held relatively constant for the past several years. It should be remembered that the active organic detergent constitutes approximately 25-30 per cent of the grand total when these figures are compared with "as sold" figures.

Table 2. U. S. Production of Alkyl Aryl Sulfonate Detergents Versus Total Synthetic Detergents Production 1939-1958

	(In Millions of Pounds 100	% Active Basis)	
Year	Total Synthetic (1)	Alkyl Aryl (2)	% of Total
1939	7.2	3.5	48.6
1940	12.0	6.0	50.0
1941	16.0	8.0	50.0
1942	20.0	10.0	50.0
1943	30.0	24.7	82.3
1944	94.3	31.4	33.2
1945	106.0	41.7	39.3
1946	183.6	45.9	25.0
1947	227.1	55.4	24.4
1948	253.0	101.4	40.0
1949	265.6	147.1	55.3
1950	571.3	251.8	44.0
1951	569.3	317.6	55.7
1952	610.5	307.2	50.3
1953	716.2	364.2	50.8
1954	741.7	389.0	52.5
1955	867.6	449.3	51.7
1956	927.0	462.1	49.8
1957	990.3	472.3	47.6
1958 (Est.)	1040.0	485.0	46.6

(1) Total excludes petroleum aromatic sulfonated compounds, salts of fatty acids, sulfated and sulfonated acids (fish oil and oleic acid), isopropyl oleate, animal fats and oils, and fish and marine animal oils.

(2) Alkyl aryl detergents include only alkyl benzenoid compounds (sulfated and slowers: U. S. Tariff Commission

Table 3. U. S. Total Synthetic Detergent Production by Types 1951-1958

(Millions of Pounds-100% Active)

Year	Total*	Alkyl Aryl** Sulfonates (Anionic)	Esters & Ethers Nonsulfonated (Non-ionic)	Alcohols & Esters Sulfated & Sulfonated (Anionic)	Amides (Non-ionic & Cationic)	Others (Cationic & Anionic)
1951	569.3	317.6	52.3	90.0 (Est.)	26.4	83.0
1952	610.5	307.2	63.2	125.7	37.0	77.4
1953	716.2	364.2	111.9	126.7	52.8	60.6
1954	741.7	389.0	130.6	129.5	56.8	35.8
1955	. 867.6	449.3	173.0	137.0	65.4	42.9
1956	927.0	462.1	193.7	143.5	69.7	58.0
1957	990.3	472.3	218.0	160.3	78.7	61.0
1958	1040.0	485.0	225.0	165.0	85.0	80.0
1958 per	cent of					
Total		46.6%	21.6%	15.9%	8.2%	7.7%

Source: U. S. Tarifl Commission (1951-1958—Period of Most Comparable Data.)

\*Total excludes petroleum aromatic sulfonated compounds, salts of fatty acids, sulfated and sulfonated acids (fish oil and oleic acid), isopropyl oleate, animal fats and oils, and fish and marine oils and waxes.

\*\*Alkyl benzenoid compounds, sulfated and sulfonated.

The alkyl aryl sulfonates which represent the largest volume of active ingredients attained this position in synthetic detergents because of their excellent detergency and sudsing characteristics and their susceptibility to large-scale production at low cost, combined with price stability. Table 2 illustrates quite vividly the prominence of alkyl in synthetic detergent production in the United States during recent years. There is an inordinant jump in the Tariff Commission data for 1949 to 1950 due not only to increased sales, but because of a reclassification of certain groups and a greater number of reporting companies.

With the alkyl aryls representing 46.6 per cent of the total, the remaining 53.4 per cent of the surfactant production is composed of esters and ethers nonsulfonated, generally referred to as non-ionics, the sulfated alcohols, the amides and the miscellaneous group containing the cationics and other anionics. Table 3 shows the production of the five major categories of surfactants during the period 1951-1958.

In 1958 the estimated total production is composed of 46.6 per cent alkyl aryls, 21.6 per cent esters and ethers nonsulfated, 15.9 per cent sulfated alcohols, 8.2 per cent amides and 7.7 per cent in the miscellaneous group.

There are only a few large volume types of organic synthetic ingredients or surface active agents. However, there are several hundred contenders for the business, and because the average packaged household synthetic detergent contains less than 30 per cent active ingredient, it is obviously far more difficult to estimate accurately the future consumption of any specific detergent five to ten years hence than it is to estimate the total. The major factors limiting such forecasts are:

- Technical improvements in the specific organic active ingredient
- 2. Changes and improvements in household packaged formulations
- Changes in relative costs of production of raw materials used in packaged formulations.
- Changes in the household appliances which use these finished detergents.

All of these factors are interrelated and in 1955 the increasing use of automatic laundry and dishwashing appliances was expected to effect a reduction in detergent consumption. As a matter of fact, formulation changes did occur and

new products were introduced which have had a degree of success in the market. However, the reverse occurred. Appliance improvements have resulted in greater consumption of practically all types of detergent formulations. When a chore such as laundering or dishwashing is made more convenient the housewife consumes more detergents. As a recognized authority in the detergent and soap industry put it, "I have never seen a mechanical improvement yet which has not increased the overall consumption of packaged household products and detergent raw materials."

In Table 4 is shown the production of dishwashers, automatic dishwashers, spinner-wringer washers, and automatic combinations for 1946-1957 with appliance industry estimates for the period 1958-1963. The dishwashers will increase in use as new home construction continues. The old spinner-wringer type washing machine's popularity with the modern housewife is declining sharply, while the new automatic combinations are expected to show steady growth and probably will represent about 12 per cent of the total washing machine production in 1963. The automatic washers (top loading and tumbler types) have shown a tremendous rate of growth. Pro-

Table 4. U. S. Production of Dishwashers and Clothes Washers 1946-1957 Projections 1958-1963 (Actual Units)

Year	Motor Driven Dishwashers	Automatic Washers (Tumbler & Toploading)	Spinner-Wringer Type Clothes Washers	Automatic ** Combinations (Tumbler & Dryer)
1946	N.A.	356,000	1,691,000	_
1947	120,000	962,000	2,695,000	_
1948	225,000	950,000	3,246,000	_
1949	160,000	928,000	2,137,000	_
1950	230,000	1,646,000	2,626,000	_
1951	260,000	1,589,000	1,795,000	_
1952	175,000	1,684,000	1.582.000	_
953	180,000	1,975,900	1,525,000	_
1954	215,000	2,353,000	1,137,412	
955	295,000	3,123,000	1,154,000	67,000
1956	400,000	3,314,000	1,117,054	104,000
1957	390.000	2,782,000	902.836	179,000
1958*	390,000	2,650,000	820,000	160,000
959*	430,000	2,800,000	801,000	200,000
960*	490,000	3,100,000	725.000	260.000
961*	550,000	3,400,000	650,000	370,000
962*	670,000	3,750,000	525,000	480,000
1963*	750,000	3,900,000	400,000	600,000

duction has tripled in the ten year

period from 1947 to 1957 and is expected to amount to about 80 per cent of all washing machine pro-

duction in 1963.

A further innovation to machine types is in the offing. Appliance manufacturers are hopeful of adding further automation to their equipment by installing a "push button" for detergents. Push button injection of the detergent into the machine is apparently more readily adapted to the use of liquid formulations. If this innovation is adopted product formulations must be varied in accordance with equipment requirements which certainly will have an effect on the synthetics and their volume.

Up until now this discussion has been limited to the household detergent market, since it represents 85-90 per cent of the total. However, there is a long and impressive list of industrial uses in an almost innumerable variety of applications for synthetic detergents or surface active agents which constitute the remaining 10-15 per cent of the total market. This industrial volume was 451,000,000 pounds in 1958. Some of the more important industrial applications

#### **Table 5. Industrial Applications** of Synthetic Detergents

Scouring powders

Textile applications, such as wool scouring, dye leveling, kier boiling and other auxiliaries

Alkali type dairy cleaners Metal cleaning compounds

Janitor supply products

Automatic washing compounds Gypsum board frothing agents

Portland cement and cement block air entraining agents

Initial emulsifiers in emulsion polymerization

Post stabilizers in high polymer latices Fertilizer curing

Herbicides

Insecticides

Fruit and vegetable washing

Fat splitting

Leather treating compounds Paint stabilizers and pigment dis-

persants

Pharmaceutical processing Firefighting compounds

utilizing alkyl aryl sulfonates as well as other surface active agents are included in Table 5.

#### **Future Outlook**

Before focusing the light on the crystal ball to see what the future may bring, a comparison of past projections with actual performance will be made. Table 6 compares projections made in 1954 for the 1954-1958 period with actual performance. Except for 1954 it is noted that the per cent deviation of the projections from actual performance is small.

In order to estimate the future market for synthetic detergents, each one of the major packaged product types must be evaluated. This information is shown

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Table 6. U. S. Total Synthetic Detergent Sales 1954-1958 Comparison of Production and Actual Performance

Year	1954* Projections	Actual** Performance	Percent Deviation
1954	2,281	2,063	10.5
1955	2,444	2,317	5.5
1956	2,677	2,690	0.5
1957	2.827	2.916	3.1
1958	2,981	2.951	1.0

Data: \*Estimates-\*\*Association of American Soap and Glycerine Producers, Inc.



Seated on the dais during the May 13 luncheon when the Charles S. Welch awards were presented were: Mrs. Estee Lauder, who presented the awards; Arthur E. Johnston, TGA president; Hiram C. Barksdale, N.Y.U. professor of marketing; Douglas Martin, first prize winner; and Miss Dorothy Hull.

who won second prize. Standing, l. to r.: Patrick Devaney, honorable mention; Milton Loeb, honorable mention; G. B. Chandless, third prize: David Schoen, honorable mention: William Lambert, Perfumer International and William V. Toffey, Jr., Drug Trade News, judges.

## TGA Meets, Reelects Johnston

GAINST the background of the theme, "The Power of an Idea," the Toilet Goods Association programmed one of the most unusual meetings in its history. Calling upon speakers completely outside the toilet goods industry, the 24th annual convention of the Toilet Goods Association, held May 12, 13 and 14 at the Waldorf-Astoria Hotel, New York, spent one entire day exploring the theme of the meeting, which could also have been described as the "Anatomy of Ideas."

Adding to the novelty of this year's meeting of TGA was a fashion show immediately following luncheon on May 12.

A discussion of certain aspects of the Le Maur patent covering pressure packed hair sprays based on PVP and a talk on the decertification of certain certifiable color tar colors highlighted the morning and afternoon sessions, respectively, of the second day of TGA's business meeting.

"The toilet goods industry has experienced tremendous growth in the past 25 years and it will continue to grow," Arthur E. Johnston, assistant secretary of Colgate-Palmolive Co., and president of TGA, declared in his report. The industry now has sales, excluding those of toilet soaps, of over one and one-half-billion dollars, Mr. Johnston stated.

"It (1958) has been a busy year and from all accounts, a profitable one," he added.

Highlight of the third day of the meeting, which was given over to the Scientific Section of TGA was the long-awaited report of the findings of the Food and Drug Administration with respect to the safety of aerosol hair sprays. This report appeared in full in the May issue of Soap & Chemical Specialties.

Dr. Paul I. Lauffer, research director of Northam Warren Corp., Stamford, Conn., received the annual award of CIBS (Cosmetic Industry Buyers and Suppliers) during the Scientific Section's luncheon. The award is presented annually to the author of the paper published in the Proceedings of the Scientific Section of TGA, which

in the judgment of the editorial board is the most meritorious paper published therein during the year.

Dr. Lauffer's paper, "Some New Keys to Cosmetic Chemistry –1958," is a critical literature review covering some 422 technical articles.

The award, and a check for \$500, which the award carries was made by John Duncan, eastern regional sales manager, Continental Can Co., Hazel Atlas Glass Division. Mr. Duncan is president of CIBS.

In addition to reelecting all officers, two new directors were elected at the meeting. Charles S. Ostreich, president of Lander Co., New York, was elected a director for a three year term expiring in 1962. Chosen as a director to represent the associate membership for a one year term was J. S. Wiedhopf, chairman of Roure-Dupont, Inc., New York.

TGA officers reelected, in addition to Mr. Johnston as president, are Jean Despres, Coty, Inc.; J. I. Poses, D'Orsay Sales Co., and

D. H. Williams, Sterling Drug, Inc., all of New York, all vice-presidents. Philip C. Smith of Yardley of London, Inc., New York, was renamed as treasurer, and William F. Denney, Jr., of Frances Denney, New York, secretary. S. L. Mayham continues as executive vice-president.

The six best essays submitted on the general topic, "Motivation of Unplanned Purchases of Toilet Goods in Drug Stores," in the annual Charles S. Welch Memorial Awards were announced at the luncheon May 13. Prizes, awarded by Mrs. Estee Lauder of Estee Lauder Cosmetics Co., New York, were won by: Douglas Martin, first prize; Dorothy Hull, second prize, and G. B. Chandless, third prize. Patrick Devaney, David Schoen and Milton Loeb won honorary mentions. The work was done as a part of the regular curriculum at the Graduate School of Business Administration at New York University.

A documentary film, "The Power of an Idea," opened the May 12th morning session, for which Herbert R. Mayes, editor of McCall's magazine, was moderator.

Edwin Ebel, vice-president in charge of advertising of General Foods Corp., White Plains, N. Y., explained how his company began to use the theme, "The Power of an Idea," which TGA adopted for its meeting. Mr. Ebel recalled that three or four years ago General Foods decided to have a "different" type of sales meeting. The aim of the meeting was the stimulation of ideas. People from outside the food business were brought in to discuss the subject. The meeting was so successful that it was adopted as the framework for other General Foods' meetings. Mr. Ebel said that he hoped the theme of the TGA meeting would be helpful in achieving the "ascendancy of ideas."

The second speaker, Charles W. Ferguson, a senior editor of the Reader's Digest spoke on the subject, "Ideas Must be Interesting."



Mrs. Estee Lauder presents Charles S. Welch awards at annual TGA convention May 13. Left to right: Douglas Martin, 1st prize; Mrs. Lauder, Dorothy Hull, 2nd prize and G. B. Chandless, 3rd prize. Three other honorable mention prizes were given. All were students at New York Univ. Graduate School of Business Administration.

He discussed one of the world's most successful publishing ideas, the *Reader's Digest*. Forty years ago the publication was only an idea. Today the *Digest* has a world circulation of some 22,000,000 copies; has 29 international editions, including Finnish, and a Polish issue is contemplated. It is in 13 languages and has a larger circulation outside of the United States than any other magazine has inside.

"The success of all this may be gratifying . . . but I think there is something more significant," Mr. Ferguson stated. "It confirms or makes all the more important the original idea (of Reader's Digest)."

The essential idea of the Reader's Digest, according to Mr. Ferguson, "was not merely to winnow down and to present material in convenient form and pocket size, but it was really to treat the average person with a degree of respect which, of course is by no means confined to the Digest, but was very, very unusual at the time that this Digest was launched."

There are about four main points or values to be derived from the success of the *Reader's Digest*, Mr. Ferguson said.

1.) "I think that the moral that comes out of our experience is that you can learn that honesty is the best way of testing an idea. Honesty is not only the best policy in general business, but the sincer-

ity of the response to an idea, to a subject, is the best way of judging it . . .

2.) "The second thing that you can learn is the value of reflection, of sustained reflection, and testing an idea in its development. You may have an idea in a lifetime, if you are lucky. An idea is a great and substantial thing.

"I feel that the way that one has at arriving at its validity is to give it this test of contemplation: We should have contemplation; we should have repeated reaction to it; we should think a great deal about it."

An idea, Mr. Ferguson continued, "should not be the thing that you just pop into action at once, but the thing that stays, a thing that stays in your mind continually, a thing that you believe in and that meets the whole test of your reflection."

Mr. Ferguson quoted Victor Hugo to the effect that "There is nothing more powerful than an idea whose time has come." "In many cases it is the waiting of a whole lifetime, the waiting of a whole force of circumstances that is necessary so that we don't lose faith, because the thing is not accepted immediately," Mr. Ferguson added.

3.) "Now there is a third thing and I think it is the most important single thing about the success of the *Digest*. If something

is to have real power, it must, in some way, apply to peoples' daily lives. The thing that we require is that it be applicable. It must apply, somehow, to a person's daily natural interest."

Mr. Ferguson further remarked that he thinks that "many of us are inclined to feel that it is our idea and it must be put over, but whether it has a general response and whether it is really interesting, is the true measure. If it is of interest, it should be of interest to the people externally and not simply to the editor who feels that it ought to be used.

4.) "The fourth and last item that you can learn from the Digest is the importance of a talk test, or a conversational test of any idea.

"I think, said Mr. Ferguson, "there is no better test, no more intelligent test of an idea than the test to see if enlightened people talk about it."

In summary, Mr. Ferguson said, ". . . the lesson that might be drawn from contemplating that idea (*Reader's Digest*) and its success . . . that lesson seems to me to be that any real image, honestly held, reflectively considered, applied to daily life, and reviewed in discussion, can have immense power."

Gypsy Rose Lee, the next speaker, discussed "What It Means to Be an Idea." She explained that she is the "product of an idea made up of managers, audiences, press agents, and that was not my idea at all. I have just tried to make the most of it."

The final speaker of the morning session, George R. Marek, general manager, RCA Victor division, Radio Corporation of America, discussed "Ideas in Music."

Timing, "a fourth dimension" in the successful sale of popular music, is "equally important in merchandising timeless music," according to Mr. Marek.

Two general ideas in the record business which may serve

as object lessons for toilet goods manufacturers were cited by Mr. Marek.

"First, packaging is as important in records as it is in perfume. The record industry, like the toilet goods industry, is in the vanguard of using the power of good design and good art to sell merchandise. Here again the spectrum of taste is wide."

"On the other hand, the fine photography and fine artists, living and of the past, help us present music."

"The other merchandising force lies in creating our own obsolescence. You have done that through fashion; we have done that through technology. We have built the record business by never leaving well enough alone. The history of this business is the history of a struggle to unveil the full beauty of music, to get nearer to the thing itself as it appears in the concert hall or in the dance hall."

Slides of various cover designs of record albums were used by Mr. Marek to make his points, and he concluded his talk with a demonstration of how his firm attempts to sell stereophonic sound through a demonstration record.

#### Schary on Ideas

A sort of case history of ideas behind several motion pictures and plays written by and/or produced under his direction was described by Dore Schary, first speaker of the post-luncheon session, May 12. Mr. Schary is the author and producer of the play, "Sunrise at Campobello", producer of "Majority of One" and "Triple Play".

"Ideas", Mr. Schary explained, "come from the soul, are related to ambition, are concerned with power in one form or another, are deeply involved with emotion and certainly are articulated in the mind."

A series of props, ranging from an automobile tire, a pair of crutches and a piece of statuary, were used by Mr. Schary as symbols for ideas that burgeoned, with two exceptions, into successful theatrical enterprises.

"Ideas", Mr. Schary concluded, "have given (man) communication, art, confort, commerce and transportation. Ideas have carried us far beneath the surface of the seas and are nudging us into space. Ideas have given us extra years of life span and also have given us the hideous opportunity to blow all of us off the earth."

Not in so many words, but in a few gestures, Hildegarde demonstrated how to achieve audience participation.

"My first idea," explained Hildegarde, "before I get to an audience is naturally to make them love me. I want to make them my friends and to make them listen to me. After all, I have something to sell—songs. I have my God-given talent, so I want them to listen. So the first idea that I have is to concentrate on doing just that."

Louis G. Cowan, president of Columbia Broadcasting System, concluding speaker of the panel said he has "a formula for achievement with ideas." "My formula", Mr. Cowan said, "is this: I plus S plus W - Ideas Plus Skills Plus Work." "You can also add the letter M, M meaning money. Money is not always the answer, but it helps to get the things that we want actually into being. One thing we cannot get away from and that is that the capacity to work hard and to translate these ideas into being is of paramount importance."

In his talk, "A Biography of Ideas", Mr. Cowan told how, when he was at the University of Chicago, he went to the editor of the midweek section of the Chicago Daily News and asked if he would like a series of articles on how people got their ideas. Among the people interviewed by Mr. Cowan were William Wrigley, Jr.; John Hertz, head of Yellow Cab Co., and George McCutcheon, author of "Brewster's Millions".

In addition to ideas of

others which became successful realities, Mr. Cowan cited how radio and television programs produced by him came into being.

"This idea of imagination," Mr. Cowan declared, "it is wonderful. The ideas that I have mentioned to you very quickly were quite simple ideas. They came into being, however, only because of the capacity of those people who originated them, the capacity of being able to get them done. We must not forget the hard work involved; the ingenuity of achievement that follows behind it."

A review of the activities of the Toilet Goods Association during the past year was contained in the president's report of Arthur E. Johnston, TGA president and assistant secretary of Colgate-Palmolive Co., New York. Mr. Johnston's report was the opening feature of the morning session, May

The major portion of Mr. Johnston's report dealt with legislation and court actions that might affect the toilet goods industry. No new Federal legislation, to date, has been adopted that affects the toilet goods industry any differently from other industries, according to Mr. Johnston.

TGA analyzed 124 bills in 36 states in the heaviest legislative year ever, and in all but one state, Indiana, where such bills were objectionable these were either defeated or amended to remove the features offensive to toiletries makers, Mr. Johnston declared.

Still pending are several bills pertaining to "fair trade." Likewise the hazardous substances bills HR 5260 and S 1283 will "also require watching to make certain that cosmetics and toilet articles continue to be exempt," Mr. Johnston stated. He added that "these bills may affect air fragrances that are not cosmetics and which do not come under our scope." He also cited the pending color additive bill as "important."

Speaking of court decisions, Mr. Johnston called attention to (Turn to Page 159)

#### **TGA Scientific Section Meets**

A NALYTICAL and toxicological aspects of aerosols were spotlighted at the all day session of the Toilet Goods Association's Scientific Section, which met May 14 at the Waldorf Astoria Hotel, New York, under the chairmanship of J. C. Erwin, Procter & Gamble Co. At the meeting the group installed its new chairman, Walter W. Edman of Evans Research, Inc., who succeeds Dr. Erwin whose term expires. New vice-chairman is Herbert Heinrich of Coty, Inc.

After giving six aerosol hair sprays a close toxicological look FDA investigators reported: "The data from both the human and animal exposures indicate that the ordinary use of aerosol hair spray preparations of the composition and physical characteristics of those included in our studies poses no problem of safety to users." The full text of the report appeared in the May 1959 issue of Soap & Chemical Specialties (p. 91) under "Inhalation Toxicity the title Studies of Six Types of Aerosol Hair Sprays," by J. H. Draize, A. A. Nelson, S. H. Newburger, and E. A. Kelly, Divisions of Pharmacology and Cosmetics, Bureau of Biological and Physical Sciences, Food and

Drug Administration, U. S. Department of Health, Education and Welfare, Washington, D. C.

"Determination of the Volatile Constituents of Aerosols by Gas Chromatography," by J. W. Jenkins and J. M. Amburgey of Colgate-Palmolive Co. Jersey City, N. J., presents a method whereby values of volatiles are obtained as weight percentages of the total aerosol sample. The technique gives results within two per cent of theoretical values and possibly closer than that, according to the authors. A formula for the calculation of propellants was developed and examples were given of analyses of both laboratory and production samples. These included room deodorants, insect sprays, and hair sprays.

The accuracy of the method is in keeping with manufacturing tolerances, the authors point out. It may be used for production checking since an analysis requires less than an hour.

The method also serves as a qualitative check on composition and may be useful in the analysis of competitive products. Its basic principle, the authors feel, may

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John M. Duncan, Continental Can Company — Hazel Atlas Glass Division, president of CIBS, presents annual CIBS award to Dr. Paul G. I. Lauffer, research director of Northam Warren Corp. at luncheon of TGA's Scientific Section, May 14.



SOAP and CHEMICAL SPECIALTIES

#### A report on technical

### Advances in Metal Containers

HE manufacturer searching for a new package for to-day's market will encounter a vast number of available container materials and designs. Their complexity will cause him to turn to the packaging engineer for guidance through the maze of possibilities.

The first problem facing the packaging engineer is the determination of adequately defined packaging requirements. Accurate. realistic and understandable packaging requirements are fundamental to the development of a satisfactory container. Once these have been established, the materials and structural designs can be selected which are most suitable for packaging the product under consideration. To oversimplify the matter, the packaging engineer compares packaging requirements with container characteristics and makes his final recommendation on the basis of technical adequacy. consumer appeal, convenience, shelf life, and economics.

What, then, are the characteristics of metal containers? How does metal satisfy the wide range of requirements encountered in modern packaging?

Metal containers are competitive price-wise with many other types of packaging. They may be made of aluminum, tinplate, plain steel or steel plate, and chemically treated to resist corrosion. The tin coating may be mirror bright or may have a satin finish to blend with an exterior design. Various tin coatings are available in order to obtain the lowest cost container commensurate with an adequate shelf life.

Although light in weight,

\*Paper presented at the 32nd annual meeting, Association of American Soap & Glycerine Producers, New York, Jan. 22, 1959. By B. J. McKernan\*, Continental Can Co. Chicago, Ill.



metal containers resist shock and rough handling. They can be designed to be rigid, semi-rigid or collapsible. By proper selection of materials and design, metal containers may be adapted to use for vacuum or pressure packaging. Metal containers are obtainable in capacities ranging from a fraction of an ounce to 55 gallons. Commercially, plate is available from foil thickness to 18 gauge. To increase the strength of a container by selecting a greater thickness, or heavier "base weight" of plate, is expensive. In many cases, increased strength can be achieved by a design change or by a modification of the plate chemistry.

Metal containers are manufactured, filled and closed at speeds as high as 800-1000 cans per minute. They can be hermetically sealed; they are impermeable to solvents. The transmission of light and water vapor is zero; the product within is protected against microorganisms, vermin, and rodents.

Metal containers do not de-

teriorate with age prior to packing. They are chemically inert, or can be made so, by means of suitable protective coatings for a wide variety of products. They have excellent merchandising characteristics and protect the product indefinitely.

#### Special Features

Metal cans are not always made of metal only; they are available also in a variety of shapes with attractive plastic nozzles and caps. The can may be a composite container consisting of metal ends with a body of fibre board, laminated foil and fibre, or it may have a plastic body. The metal container may have a plastic "picture window," in which case it is not impervious to light.

Availability of cans with easy opening and positive reclosure features, special pouring or dispensing fitments, along with convenient sizes and shapes encourages the consumer to make repeat purchases.

The metal container with its versatility in design, stacking features and attractive label 'or lithography lends itself especially well to modern, dynamic merchandising methods.

But what does the future hold? What current developments should be of interest to the metal can packer?

The steel companies continue their research efforts on developing chemical treatments for black plate. Important savings as compared with tinplate can be realized by the use of commercially available chemically-treated plate. It is being used today with great success for both light-duty and heavy-duty detergent cans.

Plate weight reductions in

recent years, made possible by taking advantage of more realistic views of packaging requirements, have effected considerable economies to the packer. To look at another industry, the current interest in the field of motor oil cans is in 55 pounds per base box of plate—twenty pounds per base box lower than the present commercial specification.

#### **Aluminum for Cans**

Aluminum, as a result of increased availability and a more favorable cost picture, is finally coming into its own as a material for rigid containers. It looks attractive and can be fabricated into odd-shapes not presently feasible with tinplate. Resistance to atmospheric corrosion is one of the strong points in favor of aluminum. An opportunity for lower freight charges on filled cans exists since a reduction of about 8 per cent on the filled case weight is affected by the use of aluminum. The product performance of this new container material differs from that of tinplate. For some products it is as satisfactory as tinplate; for others it is definitely superior; and for still others it is unsatisfactory. Like any new material, aluminum should not be used commercially for a specific product unless sufficient evidence is available that the metal has product compatibility. The scrap value of aluminum is an important consideration. Salvage of aluminum motor oil cans by service stations is being studied by a number of oil companies.

There are various approaches to fabricating aluminum cans. They may be fabricated as three pieces by conventional can making methods or by forward extrusion. Or, they may be manufactured with an integral body and bottom by reverse impact extrusion, drawing, or drawing and wall ironing. Since soldering of aluminum sideseam cans is not yet commercially feasible, three-piece cans are currently being produced with cemented sideseams. Three-piece alumi-

num motor oil cans are being marketed commercially throughout the United States by several can manufacturers.

Forward extrusion is a method whereby a long cylinder is produced and then cut into individual can body lengths. Its application to high-speed production is being studied. Reverse impact extrusion is being used commercially on a limited scale for making beer cans and aerosol cans. In this operation, a disc of aluminum, held in a die, is struck with a descending punch forcing the metal to flow back and take the form of the punch, the body and end being formed as a single unit. Drawing, and drawing and wall ironing processes are receiving consideration as substitutes for extrusion. Plate is blanked and cupped in one operation and the draw completed in a fraction of a second. The cup is trimmed to the desired height or delivered to a punch which advances it through a series of concentric ironing rings of decreasing diameter. As the wall thickness decreases, height of the container increases. Here again, the body and one end are formed as a unit. Drawn cans may be enameled prior to fabricating, whereas drawn and wallironed cans are spray-coated after fabricating. Cans made by these methods are bright in appearance, lacking the scuff marks occurring in the extrusion process. The military, incidentally, has recently announced an initial bid for such cans to be filled with jet engine lubricant.

Aluminum is a natural for pressurized toothpaste and should find widespread use in the cosmetic field. Preliminary studies with detergents, liquid starch and liquid bleach indicate aluminum holds considerable promise in these areas. Actually, for all practical purposes, starch and bleach cannot be packaged satisfactorily in a tinplate container. Are you looking for something new, something that would be a large volume item? Consider pressurized hand

soap and shampoo packed in aluminum! They should have a tremendous potential in the American market. Without too much more developmental effort, these two products could become realities.

Now that we have discussed new materials, let us consider some new approaches to can manufacturing.

#### **Manufacturing Methods**

Improved manufacturing methods bring new efficiency, economy and quality control to can making. A prime example of advanced equipment development is Continental's coil stock scroll shear line which was built at a cost of over a million dollars. The line uses plate in coil form for producing rectangular sheets for bodies and scrolled sheets for end units. Making coil stock live up to its promised economies, production efficiencies, and better quality control has called for the best thinking of Continental engineers, working closely with staff of the nation's leading tinplate suppliers and equipment manufacturers.

The line uses coils of plate nearly four miles in length and weighing as much as 17,000 lbs. The coils are transported by fork lift trucks to the uncoiler, the speed of which is automatically controlled so that the proper amount of slack is maintained in the strip at all times. Alignment of the strip is controlled electronically. A heater cabinet is used during winter months to prevent condensation of moisture on the plate. The strip advances to a roller level and on through an elaborate instrument stand. Visual inspection of both sides of the plate is achieved by the use of adjustable mirrors. The strip passes over a pinhole detector which detects holes as small as 0.001 inch and a continuous rolling-type thickness gauge, both of which record information on "memory wheels." The strip continues on to the flying press where it is cut into sheets

while in motion. The upper cutting die rotates in a circle while the lower die oscillates in an harmonic arc. The cut sheets are conveyed to the classifier which utilizes the information collected by the "memory wheels" for automatic segregation into prime, under- and over-gauge piles, and rejects. The former are all counted automatically while rejects are handled by weight.

All controls for this twostory engineering marvel are handled from an operator console; as few as three men can run the entire line, which truly represents a major advancement in can-making technology.

Fabrication of end units from enameled coil stock is another step towards further automation and utilization of metal plate in coils rather than cut sheets. Continental's gang die press utilizes coils of plate for fabricating end units at a rate of 1300 per minute. This same press can utilize scroll strips from the scroll shear line, previously described with approximately the same manufacturing capacity.

The soldering of sideseams frequently presents a problem in that the plain solder margin which is necessary when the solder is applied on the outside of the can may detract from the appearance of the lithographic design. By applying the solder to the inside of the sideseam, the lithography may be extended completely around the can body. Special lithograph coatings, inks and varnishes have been developed to withstand the heat of this soldering operation without discoloration. In some cans, the sideseams are cemented instead of soldered and this technique also permits uninterrupted lithography to circle the can body. The plastic cements used in these sideseams have been substantially improved during the past few years, permitting a wider variety of products to be packaged in this manner than

Since World War II, there has been an increasing demand for

enameled containers, essentially without exposed metal. This demand is relatively easy to satisfy in round cans; however, it has heretofore been difficult to produce oblong shaped cans with consistently high quality interior enamel systems. This was especially true of the larger can sizes.

Continental's new modern oblong can line was designed and built by its own Metal Division, Research & Development Department, at a cost of approximately one million dollars. This versatile equipment produces oblong gallon cans at the rate of 140 cpm as compared with the usual 70 cpm for this size container. By means of suitable change parts this line can produce inside soldered or outside soldered sideseams and even cemented seams. Oblong enameled containers turned out by this machine are being used with great success for metal sensitive prod-

Manufacturing lines for round cans are operating at ever higher speeds. A few years ago 325 cpm was the norm; today 550 cpm is not uncommon. The past year saw the introduction of tandem can body manufacture. A double size body blank is pre-scored, formed into a tylinder, soldered, and the two bodies separated. flanged and an end unit attached to each. Cans are made by this method at a rate of 750 to 800 per minute. Thus through improved materials, methods of application, and operating efficiency, can manufacturers have been able to keep can costs from sky-rocketing, despite increases in both material and labor costs.

Many manufacturers who are doubleseaming cans will probably be interested in high closing machine speeds as a means of reducing unit costs. For example, food packers, especially brewers and producers of baby food, are achieving increased savings through the use of Continental's "423 HCM" closing machine, operating commercially at speeds of 800 to 1000 per minute. Speeds up to

1,200 cans per minute have been demonstrated as feasible but are limited by other equipment in these canning lines. A number of high speed closing machines are available which operate at speeds up to 1,200 cans per minute.

In certain packaging situations paper labels may be preferred to a lithographic coating. Continental recently announced the introduction of metalized paper labels. They are made of smooth paper to which an extremely thin layer of aluminum has been applied by vacuum metalization prior to printing. The labels, bright and attractive, are competitive, pricewise, with paper. Having little tendency to curl, the metalized labels are readily handled by automatic equipment.

#### Corrosivity Test

Now let us turn, for the moment, to a new research technique. As might be expected, formulated products, even of the same general type, vary in their effect on containers, making it difficult to predict shelf life. Test packaging, the industry's time honored method, often requires months (even under accelerated conditions) before shelf life can be determined. Today's dynamic marketing practices make it imperative that more direct and less time consuming methods be available. To attack the problem, Continental, assisted by the Armour Research Foundation, developed the Corrosivity Tester which is a direct means for determining the corrosive effect of a product, usually within 24 hours.

The corrosivity test method is based on the theory that different or dissimilar metals coupled electrically and in an electrolyte solution (which in this case is the product) induce a current flow and provide the driving force to produce corrosion. Thus, under controlled conditions, measurement of galvanic current flow between tin and steel, or between tin,

(Turn to Page 106D)

## Cosmetic Chemists' Meeting

ORROSION testing of aerosol products by potentiometric methods and a new method of evaluation of the degerming activity of toilet bars were among the technical subjects discussed at the 14th semiannual technical meeting of the Society of Cosmetic Chemists. The all day meeting was held at the Commodore Hotel, New York, May 7.

At luncheon the 1959 special award of the society was presented to Dr. Irwin H. Blank of Harvard Medical School and Massachusetts General Hospital, Boston. The presentation, consisting of a scroll and \$1000 in cash was made by S. F. Coneybear of Colgate Palmolive Co., president of the society. Dr. Blank has conducted important research into the cutaneous action of soaps and synthetic detergents. Details of his work are outlined in Soap & Chemical Specialties, April 1959, p. 155. The award was made up of contributions by 115 members of the industry. The award committee is headed by H. J. Amsterdam, of van Ameringen-Haebler, New York, president-elect the Society of Cosmetic Chemists.

The award winner's professional achievements were described and their practical significance evaluated by Dr. Leo Goldmann of Cincinnati University's medical school. Dr. Blank's address called for improved relations between dermatologists and cosmetic chemists. These can be achieved by better communications, Dr. Blank believes. He stressed that basic research is everybody's business and that communications on this level should be unfettered by any rules of secrecy.

He conceded that a certain amount of restraint may be indicated in the details of applied cosmetic chemistry, considering the highly competitive character of the industry.

"Degerming Activity Toilet Bars - Interpretation of Bacteriological Data from Hand Washing Tests", a paper by J. J. Travers, A. C. Rohloff, E. L. Ambye, and L. J. Vinson, all of Lever Brothers Co.'s Research & Development Department in Edgewater, N. J., was presented by Dr. Travers. Initial bacterial count on test subjects is of vital importance to the results of hand washing tests commonly used for the evaluation of deodorant toilet bars, the authors contend. If initial count is ignored the same degerming agent after the same number of washes may look twice as efficient when

used on high initial count subjects than on low initial count individuals, Dr. Travers said.

In vitro antibacterial activity of deodorant toilet bars is measured with a fair degree of accuracy under controlled testing conditions, Dr. Travers said. Bars which have passed screening by simple laboratory tests are submitted to controlled use tests. Modifications of the Price Serial Basin Wash procedure are in common use today for assessment of degerming activity. These tests consist essentially of counting the number of bacteria on the hands of the subjects before and after the use of a product containing a germicide and calculating the per cent reduction. Curves are plotted of the results obtained in several

Speakers at the semi-annual technical meeting of the Society of Cosmetic Chemists (L. tor.) Isaiah S. Botwinick, Research Testing Labts., New York; Charles Merritt, Jr., Quartermaster Research and Engineering Center, Natick, Mass.; J. J. Travers, Lever Brothers Company; R. D. Charles, Atlas Powder Company; Wilton R. Earle, National Cancer Institute; L. D. Apperson, Colgate-Palmolive Co. and program chairman of the Society; D. E. Koshland, Jr., Brookhaven National Laboratory; and Morris J. Root, George Barr & Company.



SOAP and CHEMICAL SPECIALTIES

Values obtained for the relative degerming efficiency of soaps as determined in the serial basin wash test may show wide variations. Major obstacle to accuracy are the fluctuations in cutaneous bacterial counts of subjects' hands which may vary widely due to environmental, physiological, and personal causes. These factors are uncontrollable and various methods have been tried to offset them in the interpretation of data, since selection of subjects with similar initial counts is not practical.

Dr. Travers reviewed some of the traditional methods of interpreting cutaneous count data. These include per cent reductions determined on the basis of arithmetic mean values, geometric mean values, and the arbitrary assigning of a single high initial value of all subjects. While these methods yield agreement for very effective germicidal bars they fail to do so in the assessment of fair to good degerming products used by subjects varying in initial microbial skin counts.

An alternative method was then described by Dr. Travers for the evaluation of deodorant bars on small panels of subjects, ranging from 12 to 24 individuals. On the fourth wash on two successive days the counts were taken and averaged. The average was used as the standardized initial count for the test. (Some laboratories prefer to take the counts on the fifth wash.) Curves mapping the rate at which all basin counts fall off are represented by the following equation:

 $\log (y_n \cdot y_\infty) = \log (y_o \cdot y_\infty) + cn$ For a rapid and approximate calculation of the equilibrium value on the fifth or sixth wash the following equation can be used:

$$\log y_n - \log y_\infty = \frac{b}{n}$$

 $y_u = initial$  count on first basin  $y_u = count$  on  $n^{th}$  basin

y∞ – final equilibrum count

n = basin number

c = a constant (characteristic of individual)

b = a constant

Dr. Travers described the method as "essentially a regression analysis of logarithm of final count on logarithm of initial count. This analysis shows that per cent reduction is not independent of intial count. Per cent reduction is calculated from the regression line for a standard initial count."

According to the authors the

method yields unbiased and reproducible estimates of the degerming efficiencies of poor, intermediate and good deodorant bars.

Determination of electrochemical potentials between various metal components of a pressure package in the product can be used to establish and even predict corrosion in certain units, according to a contribution by Morris J. Root and Merlin J. Maury of G. Barr & Co., Chicago. Entitled "Corrosion Testing of Aerosol Products", the paper was presented by Mr. Root.

The oldest and most frequently used method to test corrosion in an aerosol product is the test pack, Mr. Root said. A number of units are stored at room temperature and at varying higher temperatures for various periods and in different positions. While temperature is important, time is the paramount factor according to Mr. Root. The units are then chilled, opened and examined macroscopically and microscopically. An additional procedure now in common use is the analysis of the product for metallic contaminations resulting from container erosion. The presence of minute quantities of iron, tin or solder may be detected by spectrometric techniques.

A new and additional tool for corrosion testing is the determination of electrochemical potentials between metallic components of the container, such as iron, solder, and tin, in the product under test. Not only can the potential be obtained, but the galvanic current generated can be measured. By the application of Faraday's law on electrolysis this information can supply quantitative data on metal corrosion, since the amount of material liberated at the anode and catode is proportional to the current passed. Use of such data can help in the interpretation of the test pack results. Furthermore, they can help to guide the selection of inhibitors and changes that are to be made in the containers.

Officers and directors of the Society of Cosmetic Chemists who attended last month's semi-annual meeting in New York were, left to right. Robert A. Kramer, secretary; Stillman Goff, a director; Savery F. Coneybear, president: Miss Sophie L. Plechner, a director, H. J. Amsterdam, president-elect, and L. I. Conrad, treasurer.



Continental Can Co. has evolved instrumentation and a technique for the ready application of Faraday's law to the corrosion measurement in metal containers, Mr. Root pointed out. It involves the use of electrodes embedded in epoxy resins. A booklet entitled "Corrosivity Tester" published by Continental carries information on the technique, which utilizes a galvanometer converted to a microampmeter and Beckman pH-meter. Mr. Root showed color slides illustrating the set-up.

Speaking of individual products, the author said that low corrosion rate prevails in hair sprays formulated with esterified shellac. where solder and tin are anodic to iron. Extremely low corrosion is reported for hair sprays based on PVP and copolymers. Shelf life up to two years has been observed in such products.

By contrast, iron is anodic to tin and solder in sodium lauryl sulfate shampoos which are notoriously corrosive to metal containers. The same applies to such products when they are modified with triethanolamine. In shampoos incorporating "Deriphat 170-C" (General Mills Inc.), an amphoteric surfactant, iron is cathodic to the solder and corrosion rate is high. Use of drawn cans requiring no solder brings improvement to these products.

While electrochemical data are an excellent tool in corrosion testing of metal packaged aerosols, Mr. Root pointed out that the conventional methods cannot be dis-

pensed with.

Application of potentiometric methods to a very different field was described by Isaiah S. Botwinick, Research Testing Laboratories, New York, who spoke on "Measurement of Skin Moisture by Potentiometric Methods."

Sorbic acid is a useful preservative for cosmetics containing non-ionic surfactants, according to R. D. Charles and Phyllis J. Carter, of Atlas Powder Co., Wilmington, Del., who presented a paper en-

titled "The Effect of Sorbic Acid and Other Preservatives on Organism Growth in Typical Non-Ionic **Emulsified Commercial Cosmetics.**" The laboratory of Atlas Powder Co.'s product development department obtained from four nationally known cosmetic houses a series of typical non-ionic emulsions. One series of these products was prepared with preservatives normally used and a second series was pre-

pared with sorbic acid. Both groups of products were inoculated with a bacterium and eight molds, stored for three months, and observed for evidences of organism growth. Many of the commonly used preservatives were effective in these non-ionic products, the authors reported. Where the conventional preservatives failed and where they were effective sorbic acid gave good protection.★★

#### Scientific Section

(From Page 54)

easily be extended to the analysis of other aerosol solutions such as lacquers, shoe polishes, dog sprays, sun tan lotions, and medicinal sprays.

The use of rabbit screening tests for evaluation of antibacterial agents in soaps and cosmetics is described in a paper by Harry L. Rubenkoenig and Paul A. Majors of Hill Top Research Institute, Inc., Miamiville, O. Entitled "In Vitro and Use Tests for the Evaluation of 'Degerming' Agents" the paper also describes the use of the human cheek as a test area replacing the hands used in most previously developed wash tests. In vitro tests, the authors point out, do not give information on residual and built up activity of the agent. Surface activity and depth of penetration of antibacterial products can be screened by tests on live rabbits. Final proof of their efficacy however must be obtained on human subjects. A panel of six is considered an absolute minimum for meaningful results. The human cheek was chosen as a test area because its skin structure presents less variation than that of the hand, and because the face is easier to protect against unwanted contacts with other chemicals or chance bacterial contaminations. Results indicate that degerming agents may be somewhat less effective on the face than on the hands, which is of importance for the formulation of facial products.

Where the degermining

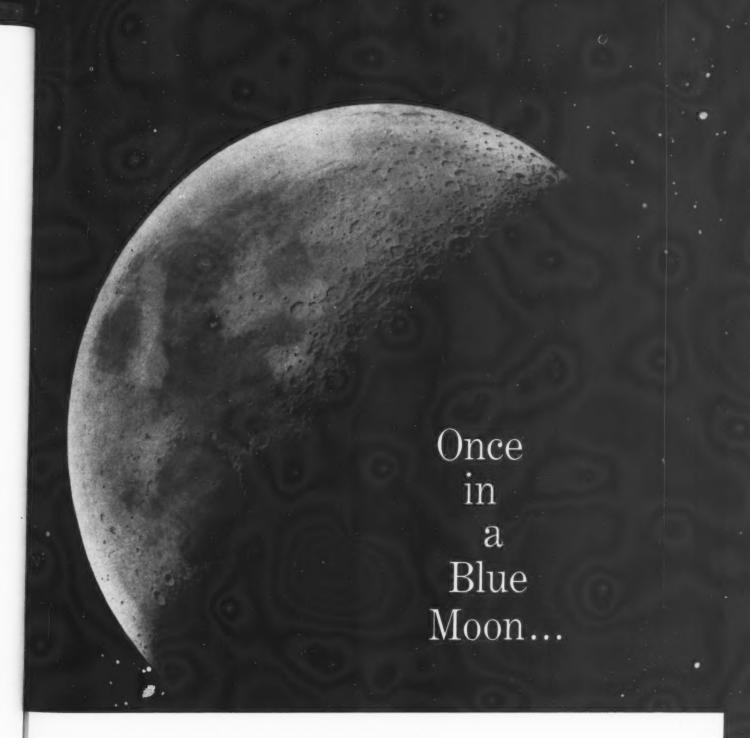
agent is used in deodorant products, the authors stress the necessity of odor tests under simulated use conditions.

S. B. Mecca of Schuvlkill Chemical Co., Philadelphia, speaking on "Allantoin and the Newer Aluminum Allantoinates" pointed out that allantoin's beneficial effects include an anti-irritant property. As a consequence compounds, such as sodium lauryl sulfate which may not be tolerated by some individuals may become acceptable in the presence of allantoin or some of its derivatives.

The mystery of olfactory mechanisms may be approaching elucidation according to Paul G. I. Lauffer, Northam Warren Corp., Stamford, Conn., whose subject read "Olfaction and Cholinesterase."

"About the Mechanism of Moisture Regulation in the Horny Layer of the Skin," a paper by Otto K. Jacobi, Kolmar Research Center, Wiesbaden, Germany, reported on the natural moisturizing factor in the hornified epithelium, its importance and possible replacement by available products.

Other papers presented included: "A Quantitative Clinical Method for Comparing Antidandruff Agents," by Herbert J. Spoor, Department of Medicine (Dermatology), New York Hospital and The Cornell University College of Medicine; "Comparison of Curl Strength of Tresses Treated with Water, Hair Sprays and Waving Lotions," by E. J. Stravrakas, Fabric Research Laboratories, Inc., Dedham, Mass.★★



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> Charles E. Beach, second vicepresident of Chemical Specialties Manufacturers Assn., presided at group luncheon, May 20, during 45th midyear meeting of CSMA in Chicago. Mr. Beach is vice-president of John C. Stalfort & Sons, Baltimore. See story on page 67.



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# CSMA Midyear Meeting

RODUCT sales surveysand there were six of them -stole the spotlight during the 45th midyear meeting of the Chemical Specialties Manufacturers Assn., May 19-20, at the Drake Hotel, Chicago. The sales figures cover aerosols, insecticides, brake fluids, automobile cooling system chemicals, industrial detergents and industrial waxes and polishes. Overall, and where comparative figures were available, the figures showed 1958 to be ahead of 1957. in spite of a recession. A new survey was that covering industrial detergents. Details on all surveys appear later in this report.

Apart from the survey, and three top-notch speakers from outside the chemical specialties field, panel or symposium type discussions dominated the meeting. Featured outside speakers included William C. Stolk, president of American Can Co.; James Q. du Pont, administrative assistant, public relations department, E. I. du Pont de Nemours & Co., and Larry Le Sueur, radio and television commentator and news analyst of Columbia Broadcasting System.

An optimistic report of

## Near record turnout hears good news reported in six product sales surveys

"What's Ahead for the American Economy" was presented by John K. Langum, president of Business Economics, Inc., Ghicago economic consultant.

Donald M. King, head of Masury-Young Co., Boston, and president of CSMA, in his president's report called for greater participation of individual business men in the affairs of government, particularly in the fight on inflation. In his address, Mr. King read a letter he had received from President Eisenhower, in response to one from Mr. King, regarding the need for individual citizens to keep apprised of government fiscal policies particularly.

Nelson J. Gothard, chief chemist of Sinclair Refining Co., and a past president of CSMA, was guest of honor at the group luncheon May 20. Mr. Gothard retired June 1 from Sinclair after nearly 40 years with the firm. A salutation to Mr. Gothard was

read by Charles E. Beach, CSMA second vice-president.

Association business transacted at the 45th midyear meeting, second largest in CSMA's history, with a registration figure of 834, included the election of all divivisional officers as nominated; the election of A. A. Mulliken as an honorary active member of CSMA; a vote to change the name of the Soap, Detergents and Sanitary Chemicals Products Division to Detergent and Cleaning Compounds Division, and the favorable vote on an amendment to the constitution permitting the treasurer of CSMA to appoint an assistant treasurer who is not a member of the association. The amendment also permits the treasurer to delegate to the assistant treasurer any of his duties.

The election of A. A. Mulliken, assistant secretary of CSMA since Dec., 1955, as an honorary member makes him available for

nomination as secretary of CSMA.

American Can Co. has undertaken a four-part government relations program to help combat "powerful forces which are seriously undermining our political and economic system," William C. Stolk, Canco president, told the group luncheon May 20. In a call to business leaders to "market" their political viewpoints as forcefully as their products and services, Mr. Stolk warned that "unless we become more sophisticated politically we can look forward to the day when the corporation will become obsolete and government absolute."

The public, according to Mr. Stolk, "is being hoaxed into believing that the nation can consume more than it produces, that our standards of living can be increased by restricting output and reducing hours of work, and that the good life is a life of irresponsibility."

Mr. Stolk said that American Can Co., in a determined effort to translate its convictions into action, has inaugurated the following program to stimulate activity by the company and its management in the political arena.

"1.) To inform, equip and encourage everyone in the company's management organization to speak out on the business facts that have a direct bearing on the economic and social well-being of the company, its people and the nation.

"2.) To make sure that every employee, and his family and neighbors get from the company, both face to face and in writing, a continuous flow of facts and viewpoints to round out his understanding and make it possible for him to reach judgments based on all the truth rather than part of it.

"3.) To give the company's managers the opportunity to study political processes and to learn the art of practical politics. The purpose of this phase of the program is to give managers, and through them, all employees, genuine encouragement to participate personally in politics.

"4.) To give elected government officials, through the company's management organization, the firm's views on important national issues as they come up for consideration in pending legislation."

Ten principles and policies which "governed the establishment and growth" of E. I. du Pont de Nemours & Co., were discussed by James Q. du Pont in his address, "Pattern for Success in Business", given following the group luncheon May 19. The points, initialed on a blackboard in spheres like spokes around the "hub" which bore the initials "TPR" (Point 10. "Treat People Right") were '1.) "Fill a need"; 2.) "Have job know-how" to fill those needs; 3.) "Meet competition" "Outsell" (or Beat) competition; 4.) "Make it better; make it safer;" 5.) "Thrift and economy—

Captions, facing page

Top row, left to right: Cameron Baird. Baird & McGuire, Inc., Alvin Saeks, Puro Co. and M. F. McCombs, Hooker Chemical Corp., Robert Morse, Boyle-Midway Division, American Home Products Corp., Glenn Doerr, Charles R. Morrison and Harold V. Schmidt, Federal Varnish Division.

Second row: Robert A. Tucker, Indiana State Department of Health, A. James Coulter, Gulf Oil Corp., and Herbert P. Plank, Chief, Drug Division, State of Connecticut. Edmund Budzilek, Wheation Plastics Co., A. R. Marks, Wheaton, Francis A. Mina, Lodes Aerosol Consultants, Inc., Walter C. Beard, Jr., Risdon Manufacturing Co., C. D. Hollopeter and Ralph H. Whitney, Owens-Illinois Glass Co.

Third row: C. L. Weirich, C. B. Dolge Co., Ira P. MacNair, publisher, "Soap & Chemical Specialties", N. J. Gothard, Sinclair Refining Co., Thomas Morgan, "Soap & Chemical Specialties", A. G. Grady, Sinclair Refining Co., Richard T. Yates, Hercules Powder Co., R. B. Trusler, Davies-Young Soap Co.

Fourth row: Ralph Hamilton, Baird & McGuire, Inc., S. W. Skinner, Bareco Wax Co., Div. of Petrolite Chemical Corp., E. E. Husted, Union Carbide Chemicals Co.; William Gavin, and Emery Bleier, Nopco Chemical Co., John Quinn, Theobald Industries.

Fith row: William Moburg, Rex Research Corp., Don Weir, Continental Can Co., Joseph Gregory, Newman-Green, Inc.: Henry I. Brownstein, Hysan Products, Inc., Cid Fernandez, Odorite Chemical Industries, Inc.

don't waste anything"; 6.) "So conduct your business that you can always secure additional capital when needed;" 7.) "Plow back earnings into the business, heavily;" 8.) "Diversify—product-wise; departmentalize—organization-wide;" 9.) "Owner-management and personnel attention to business."

# Nelson J. Gothard. seated, who retired June 1 as chief chemist of Sinclair Refining Co., guest of honor at CSMA group luncheon May 20, receives congratulations from Charles E. Beach, second vice-president of CSMA who saluted Mr. Gothard at the luncheon. Mr. Gothard is a former CSMA president and has been with Sinclair for 10 years. Applauding is CSMA president, Donald M. King, head of Masury-Young Co., Boston.



#### **Automotive Division**

Relative labeling uniformity which avoids misbranding will result from the new Antifreeze Model Bill suggested by CSMA to the various state legislative bodies, A. James Coulter, Gulf Oil Corp., told the Automotive Division of which he is chairman. He was speaking at the division's opening session, Tuesday morning, May 19. Mr. Coulter pointed to the chaos which had probably been avoided by the model bill for brake fluid legislation and referred to CSMA's efforts pertaining to hazardous products labeling legislation.

Through the Automotive Division's efforts, Mr. Coulter



pointed out, CSMA is the only supplier to industry of metal test coupons for corrosion testing of antifreeze and for brake fluid corrosion testing; of hydraulic brake cups for rubber swelling tests and of standard compatibility test brake fluid. Two propositions are pending: CSMA-recommended test procedures for radiator chemicals and standardized paint test panels for evaluating cleaners, polishes, and waves.

Speaking of automotive aerosols William Moonan of Sprayon Products, Inc., said; "For every 'live' product or type now on the market, there are probably ten dead brands or types". Mr. Moonan gave a paper on "Present and Future Aerosol Automotive Specialties" in which he classified the failures into three categories. The "Cophants", he said, "are symbolic of packages which are not very well engineered or for which the formulation has not been thoroughly tested". Mr. Moonan then described the "Rhinophants", which represent products "not justified as pressure packages by added convenience or added ease of use. The 'Rhinophants' would include the one-shot 'gimmick' items frequently seen on the market." The third group, the "Rhinows", Mr. Moonan said, "are all right as far as they go, but they are not sufficiently promoted and advertised. This group generally includes the 'we have one too' family of products."

Finally the speaker pointed out the family of "Cows". These, he said, "are the products that economically fulfill a need. They are properly packaged and tested and they are sold and promoted so that more than three to eight per cent of the population of this country knows of them."

When attempting to evaluate his line of products for pressure packaging possibilities the manufacturer may find it helpful to check with a custom filler. Constructive ideas and comments might also be forthcoming from manufacturers of propellants, valves and containers, Mr. Moonan stated.

"What Automotive Products Will Be Museum Pieces in Ten Years?" was the question raised in a talk by A. F. Connolly, Simoniz Co., Chicago. "Some automotive products are positively destined to extinction in the forseeable future. In other cases, extinction is anybody's guess", Mr. Connolly told his audience.

"According to certain Detroit sources, the automobile chassis requiring no grease lubrication is a sure thing on at least two 1960 model cars. And, according to the same sources, it's possible that within two or three years nearly all new cars will have a lube-free chassis.

"A non-lubricated lifetime fabric bearing has been perfected, according to Detroit reports. It is claimed that this bearing offers greater fuel economy, lower first cost, lower replacement cost, and, of course no lubrication. The lubrication alone would save motorists only about \$18 a year, but with the other savings might be a salable economy package", Mr. Connolly reported.

These developments mean "inevitable sales declines appear to be ahead for the automobile chassis lube market", according to the speaker.

"We hear rumors from Detroit about the progress being made on closed cooling systems on today's piston engines which would be factory sealed. This development would eliminate the need for anti-freeze and radiator chemicals" Mr. Connolly pointed out.

Progress is reported in gas turbine engines for cars. Turbines have no carburetion system, a greatly simplified electrical system and they are air cooled. "Thus the turbines could mean the end of the need for antifreeze as we know it today, as well as other radiator chemicals", according to Mr. Connolly who added that the free piston turbine engine for passenger cars is another possibility discussed in Detroit. Requirements in automotive fuel and other automotive

Captions, facing page

Top row, left to right: H. R. Shepherd, Aerosol Techniques, Inc., John Morana, Par Industries, Inc., Louis Brunner, Brulin Co., Jack Varley, James Varley and Sons, Inc., Gordon Gilroy, Precision Valve Corp., Richard P. Reavey, John H. Breck and Co.

Second row: N. W. Kent, E. I. du Pont de Nemours and Co., Chris Canaday, Continental Filling Corp., A. A. Mulliken, CSMA and H. W. Hamilton, CSMA: Jose Zevallos and Arthur Gronet, Reichhold Chemicals Inc., A. E. Budner, S. C. Johnson and Son, Inc.

Third row: Herbert L. Saunders, Stepan Chemical Co., H. W. Zussman, Geigy Chemical Corp., Leonard Baer, Precision Valve Corp. and Kurt Wasserman, Hostawax Co.; John Lyons, Dodge and Olcott, Inc., Louis C. Bryant, J. I. Holcomb Manufacturing Co.

Fourth row: Reuben Landau, Beacon Co. and Phillip Harris, Mac-Lac Co. Frank G. Calkin, Tennessee Corp., and Walter C. Fox, Allied Chemical Corp. W. S. Jessop, U.S. Sanitary Specialties Corp. and Quaid Bloom, Fries and Fries, Inc.

Fifth row: Kenneth Nash, Olin Mathieson Chemical Corp. and W. J. Bunnel, Geigy Chemical Corp., David S. Tillotson and Frank A. Lucard, Pennsalt Chemicals Corp. and R. G. Hill, Crown Glass Corp., John Flanagan, Federal Varnish Division and Wilson Sanders, Jensen Associates.

needs may change basically if these envisaged possibilities become realities.

Speaking of the new car finishes and their need for cleaning, polishing and waxing, Mr. Connolly reported on results of tests and surveys conducted on this subject. He believes that "three reasons for polishing or waxing an automobile will still remain valid in the eyes of many car owners. These are: 1) to remove traffic film and road haze, 2) to give protection to the finish against sunlight and moisture, and 3) to remove minute scratches and blemishes from the car finishes".

"The Effects of Water Quality on the Corrosion of Metals in Glycol Antifreeze Solutions", by M. A. Boehmer and J. W. Compton, Wyandotte Chemicals Corp., stressed the necessity of running fleet tests rather than rely on laboratory test results for the evaluation of automotive antifreezes. The corrosion of aluminum and ferrous alloys was compared by laboratory,



#### CSMA Survey of Manufacturers' Antifreeze Sales for 1958

	Gallons	Percent of Total
Primary Ethylene Glycol Type	94,649,358	85.9
Primary Methanol Type	15,566,999	14.1
		-
TOTAL	110,216,357	100

#### Comparison of 1958, 1957, 1956 CSMA Brake Fluid Surveys (showing fluid actually compounded)

	195	8	19	57	195	56
	Gallons	Percent-	Gallons	Percent-	Gallons	Percent-
l. S.A.E. Spec.						
Former 70R2	1,285,352	13.1	2,167,335	20.8	2,398,994	24.9
70 R1	7,778,393	79.1	7,028,637	67.5	5,310,772	55.5
2. Govt. Spec.	_*	-	55,127	0.5	255,162	2.6
3. Non-Spec.	771,066	7.8	1,160,687	11.2	1,625,306	17.0
TOTAL	9,834,811	100.0	10,411,786	100.0	9,590,234	100.0

<sup>\*</sup>Too revealing to be released.

#### CSMA Survey of Automobile Cooling System Chemicals Production (Exclusive of Antifreeze) Comparison of 1958, 1957 and 1956

1 — Treatment Package (Consumer Size) Number of Individual Consumer Size Packages

	1958	1957	1956
A-Cooling System Cleaners			
1 Dry form, two phase type			
cleaner and neutralizer	1,300,901	1,399,163	1,840,171
2. Dry form, one phase	613,040	441,485	469,864
3. Liquid form	2,710,047	2,203,305	2,368,989
Total	4,623,988	4,043,953	4,679.024
B-Cooling System Sealers			
1. Liquid form, except block			
sealers	9,753,311	9,390,758	8,894,377
2. Dry form, except block sealers	1,154,396	998,761	1,080,055
3. Heavy duty and block sealers	1,523,156	1,292,640	1,217,892
Total	12,430,863	11,683,159	11,192,324
C-Cooling System Inhibitors			
1. Dry form	442,240	*	580,211
2. Liquid Form	*	464,109	1,136,793
D-Combination Water Pump Lubricant			
and Rust Inhibitor	9,161,030	7,365,665	6,600,532
E-Others	*	*	*

<sup>\*-</sup>Too revealing to be released.

simulated service, and fleet testing of glycol antifreeze solutions. Based upon the simulated service and fleet test data these conclusions were presented:

 The mineral content of water, particularly chloride and sulfate ions, can adversely affect the corrosion protection of aluminum and ferrous metals by glycol based antifreezes.

 In glycol based antifreeze solutions, cast iron and 1020 steel corroded generally at a lesser rate of penetration than SC64C aluminum.

3. For most of the antifreezes tested, the laboratory corrosion

test data, as compared with fleet test data, gave misleading results regarding the comparative corrosion rates of SC64C aluminum and ferrous metals.

Antifreeze sales in 1958 rose to 110,216,357 gallons from the previous year's total of 106,874,822 gallons, the Automotive Division was told at its opening session on May 19 by J. M. Russ, Union Carbide Chemicals Co., who presented the automotive products surveys. The 12 manufacturers on whose reports this figure is based are estimated to cover over 95 per cent of the antifreeze production in the United States.

Ethylene glycol (non-volatile) antifreeze accounted for 94.6 million gallons or 85.9 per cent of the total antifreeze market. The remaining 14.1 per cent or 15.6 million gallons were methanol (volatile) type products. Producers sold 70,434,508 gallons of the ethylene glycol type antifreeze in packaged form. The one gallon unit was vastly predominant, 55,395,663 gallons being sold in this form; 11,-870,715 gallons came in quarts, and only 3,1698,130 gallons in drums. Packaged methanol type antifreeze sales amounted to 10,546,015 gallons, about half of which were sold in one gallon units.

Automotive cooling system chemicals production in 1958 (excluding antifreeze) showed an increase according to reports by 26 manufacturers. The 1958 total of consumer size packages of chemicals amounted to 4,623,988 units, or 580,035 units more than the 1957 production.

Hydraulic brake fluid compounded during 1958 amounted to 9,834,811 gallons, combined reports by 28 companies showed. This represents a 5.5 per cent drop from last year's figure, which was about 10.5 million gallons. While there has been a reduction in quantity there is a very definite trend toward quality in the brake fluid sold. Legislation enacted in 17 states stipulating S.A.E. 70R1 brake fluid as the minimum standard admitted for sale to customers

is clearly reflected in the break down.

#### Wax Division

The Waxes and Floor Finishes Division had its opening session Tuesday morning, May 19. First paper on the program was "The Role of Plasticizers in Polymer Floor Finishes", by H. A. Naidus, H., Merken, and H. M. Szczepanik, Polyvinyl Chemicals, Inc., Peabody, Mass. Delivered by Mr. Naidus, the report dealt with plasticization of polystyrene emulsion type floor finishes. Acrylics, Mr. Naidus said, do not, as a rule, require plasticizers.

The plasticizer may be added directly to the polystyrene emulsion with subsequent dilution and blending, or it may be added to the unplasticized floor finish formulation. Both methods give good results, Mr. Naidus reported. A standard floor finish formulation was used, containing polystyrene emulsion, polyethylene emulsion, alkali soluble resin, and plasticizer. The latter was a 1/1 blend of dibutyl phthalate (DBP) and tributoxyethyl phosphate (TBEP).

The total amount of plasticizer was varied as well as the ratio of plasticizer components and the effect of these variations on the performance properties of the final product were evaluated. Substitutions of different plasticizers were made for either TBEP or DBP and their effect on performance characteristics were determined.

These series of experiments lead to the following findings, Mr. Naidus reported:

"1. The optimum amount of total plasticizer content was found to be in the range of 10-20 per cent based on the polystyrene solids (15 per cent).

"2. Increasing the total plasticizer content tended to improve the gloss, leveling, recoatability and water spot resistance of the polymer finish.

"3. Decreasing the total plasticizer content tended to improve the removability, soil resist-

## CSMA Survey of Automobile Wax and Polish Production — 1958 (covers house brand and private brand production reported by 24 companies)

Number of Individual Packages

	20 Oz. and Less	Over 20 Oz. and Less than 5 Gal.	Bulk in Gals. 5 Gal. and over
A. Liquid Form			
Pre-wax cleaner     Polish and cleaner—No	2,509,971	91,963	÷
wax content 3. Combination cleaner	6,136,908	221,664	5,110
and wax	2,362,393	30.788	*
4. Liquid wax for			
automobiles	386,896	÷	÷
5. Chromium Cleaner	2,590,199	2,850	÷
		Bulk Par	ste Form
		in 1	Lbs.
B. Paste Form			
1. Pre-wax cleaner	1,230,363	÷	÷
2. Automobile wax	2,186,928	÷	÷
3. Combination cleaner			
and wax	6,712,564	*	÷
C. Other	-0-	-0-	-0-

†Too revealing to be released.

ance and black heel marking resistance.

"4. A blend of TBEP and DBP gave a floor polish of better

#### CSMA Floor Products Survey 1958 — 1957 (expressed in gallons unless otherwise indicated)

Own Brand and Private Label Change 1957 Per Cent 1958 1. Wax Emulsions (Self-Polishing) 8 547 126 8 740 129 + 2.26% Less than 16% non-volatile 16% and greater non-volatile 2,803,450 2,755,594 - 1.71 2. Polymer and Resin Polishes 3 250 987 2,177,288 49.31 a. Aqueous b. Alcohol (Does not include shellac varnishes) 84,948 88.232 + 3.87 3. Liquid Floor Cleaners and Wax Strippers Less than 20% non-volatile 2,210,390 2,294,956 + 3.83 Soaps, with or without builders 3 002 027 3 473 833 +15.72Synthetics, with or without builders Soap and synthetics mixed, with or without builders 2.318.832 2.596.656 +11.9820% and greater non-volatile Soaps, with or without builders 1,577,564 1.505 259 \_ 4.58 Synthetics, with or without builders 269,977 313.171 +16.00Soap and synthetics mixed, with or without builders 869.631 837.432 - 370 4. Floor Sealers and Gym Finishes a. Type: Non-aqueous, oleoresinous, petroleum solvent 2 230 298 2 339 345 4 89 b. Type: Lacquer and others 94,452 + 3.54 5. Solvent Type Waxes 625.009 661,392 + 5.82 a. Liquid waxes b. Paste waxes 2,157,456\* 1,976,156\* - 8.40 6. Emulsion Paste Waxes 515,563\* 665,778\* +29.14 7. Dust Mop Treatment (Does not include floor oils) 1,186,560 1,296,791 + 9.29 8. Sweeping Compounds 23,467,597\* 18.683.709\* -20.39

<sup>\*</sup>Expressed in pounds.

overall performance properties than either plasticizer alone.

"5. TBEP was shown to contribute markedly to the gloss and leveling qualities of the floor finish. It also appeared to improve the soil resistance and, in general, to aid recoatability as compared to its replacement.

"6. DBP apparently directly aids removability, black heel marking resistance and water spot resistance."

"The Measurement and Control of Powdering in Floor Polishes" was the subject of a study by R. H. Cahill, M. G. Koutrakis and L. H. Perry, U. B. S. Chemical Corp., Cambridge, Mass. This paper appears in full beginning on page 79.

Helmuth L. Pfluger and Charles V. Pratt, Borden Chemical Co., Philadelphia, next discussed "Light-Scattering Studies on Floor Finish Latices". Copolymer latices intended for floor finishes formulations were studied by means of light scattering measurements. The authors describe a technique of measurement with the Brice-Phoenix light scattering photometer. Their investigations included two classes of latices. One type is polymerized in the presence of a supporting colloid which contains carboxy groups. The second type is polymerized without supporting colloid, but contains the desired level of carboxy groups in the reacting monomers themselves.

Light-scattering studies over a range of pH showed that there is no essential difference in behavior between the latices which contain internally copolymerized carboxy groups and those which do not. The former become more hydrophilic as the pH is increased. There is an optimum range of high pH at which the latex molecules have their maximum solvation, permitting intimate mixing with other components of a formulation. The resultant homogeneity, the author points out, contributes to excellent film formation, high gloss and clarity.

On the other hand, latices

which do not contain hydrophilic groups such as carboxy groups in the polymer structure do not change their light-scattering behavior with pH, the authors report. This observation, they point out, shows that the particles essentially maintain their original identity until they form a film. In this case the supporting colloid contributes largely toward film coalescence and clarity, but plasticization of the particles is also necessary, according to the authors. It has been found desirable, they added, to build the optimum degree of plasticization directly into the polymer. This policy is claimed to avoid the disadvantages of migrating plasticizer and to give maximum resistance to black heel marks.

An experimental technique was outlined for measuring viscosity changes of floor polish at selected drying stages in "A Study of Factors Affecting Gloss of Floor Polishes—Viscosity Characteristics", by Bernard Berkeley and Daniel Schoenholz of Foster D. Snell, Inc. Delivered by Mr. Berkeley, the paper described studies by this technique on ten polishes in an unsuccessful attempt to relate gloss properties to viscosity change on drying.

The CSMA Floor Products Survey for 1957 and 1958 was presented by Daniel Schoenholz of Foster D. Snell, Inc. Shipments of polishes, finishes, and cleaners intended for floor maintenance in commercial, industrial, institutional and public buildings are covered. Sales to federal, state and municipal governments are included. (Retail packages are excluded.) Figures are collated from reports by 115 companies, largest response to date, according to Mr. Schoenholz. Shipments increased in most categories in 1958 outweighing downtrends in the sales of some product groups. Shipments of aqueous polymer and resin polishes increased by almost 50 per cent over the previous annual figure. Emulsion paste wax shipments rose by almost 30 per

cent. A downtrend in the sweeping compounds market may be compensated for by an increase in sales of dust mop treatments, Mr. Schoenholz said. Shipments of all types of cleaners and strippers except soaps show marked gains.

#### Soap Division

The Soap, Detergents and Sanitary Chemical Products Division held a symposium on synthetic water-soluble resins and gums in which five speakers participated.

Leslie D. Berger, Jr., Union Carbide Chemicals Co., was moderator.

The "Properties and Uses of Sodium Carboxymethylcellulose" were reviewed in a paper by J. B. Batdorf, Hercules Powder Co. A laboratory curiosity until 1930, the production of CMC has increased from two million pounds in 1947 to over 25 million pounds in 1957. The largest single market for this material is the built soap and detergents industry. This market, Mr. Batdorf said, is still growing. The long list of other industrial consumers includes insecticides, automotive polishes, suspension polymerization, water-soluble films, textiles, adhesives, etc.

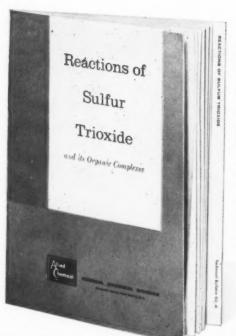
In general, CMC is useful in every application where hydrophillic colloids are indicated, Mr. Batdorf pointed out. The basic properties on which its commercial value is based are the ability to thicken water to suspend solids in aqueous media, to stabilize emulsions, to absorb moisture from the atmosphere, and to form films.

"Hercules Powder was the first commercial producer of CMC in the United States", Mr. Batdorf said and added: "Today, du Pont and Wyandotte as well as Hercules, produce and market the technical grade product . . . The technical grades are best known by their trade names — du Pont's 'Sodium CMC' Wyandotte's 'Carbose' and Hercules' 'CMC-CT'."

"Polyvinyl Alcohol-A Versatile Synthetic Polymer" was the (Turn to Page 102)

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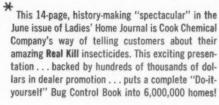
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# Powdering of Floor Polishes

Method of measuring "powdering" has been devised, and causes have been studied using new technique.

No single material responsible for this condition.

#### By Manuel G. Koutrakis, Richard E. Cahill and Lloyd H. Perry\*,

U B S Chemical Corp. Cambridge, Mass.

A dependable, qualitative method of measuring the "powdering" of floor polishes has been devised. Correlation between laboratory test results and actual performance has been firmly established. The basic causes of powdering have been studied using the new technique and, as a result, corrective action can be confidently recommended. Practical formulating suggestions are offered in support of this claim.

HE terms "powdering" and "dusting" are commonly used to describe the deterioration of a floor coating through abrasive wear resulting from traffic or machine buffing. The films thus affected show a white, powdery deposit which collects on the surface. In severe cases complete disintegration of the coating may take place, thus depriving the substrate of protection. This surface abrasion and collection of white powder results in floors having a poor appearance and is, therefore, undesirable.

Powdering is not peculiar to one type of floor polish formulation; it has been observed in high wax products, resin finishes, and in polymer finishes of both the polystyrene and polyacrylate types. It is true, however, that problems of this type have become more

prevalent in recent years with the introduction of formulating techniques based on high performance polymers as the basic constituent. A thorough investigation of the problem, the results of which form the basis for this paper, has convinced us that the polymers themselves are not the inherent cause of powdering. In searching for certain special features which are possible with these newer raw materials, the critical balance of a system containing many ingredients may be upset and surface abrasion is often the result.

#### **Test Method Important**

As part of our technical service as a polymer supplier, UBS Chemical Corp. has spent considerable time studying the powdering of floor polish formulations. In our work we had strongly felt the need for an acceptable laboratory test which would duplicate

powdering as observed under field conditions. It appeared to us that this was the starting point if the problem were ever to be attacked on an industry-wide basis. In cooperation with Foster D. Snell, Inc., U B S undertook to develop a satisfactory method of measuring this phenomenon. The basic requirements of any proposed method were felt to be: (a) complete differentiation between powdering and non-powdering formulas; (b) qualitative breakdown of powdering formulas as to the relative degree of dusting; (c) A simple and rapid test procedure; and (d) reproducible results.

As part of the program the following test methods were examined and discarded as unsuitable:

A. Tabor Abrader: Excess abrasion even when using the "softest" wheels. Would not dis-

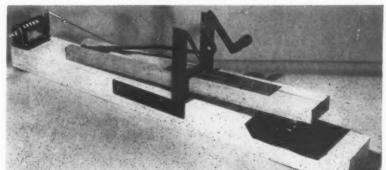


Figure 1. The "Crockmeter"

<sup>\*</sup>Paper presented during 45th midyear meeting, Chemical Specialties Manufacturers Association, Chicago, May 19, 1959.

- tinguish precisely between powdering and non-powdering formulas.
- B. ASTM Air Blast Abrasion Tester: No correlation; tedious method.
- C. Gardner Straight Line Washability Apparatus: Various adaptations of this machine to check abrasion were unsatisfactory. Excess abrasion with relatively few strokes and the lightest possible load was the major drawback in using this apparatus.
- D. Various hand abrasion techniques: Non-reproducible; varied with operator and abrading medium.

It was found that the requirements of the test procedure were best met with the "Crockmeter," a device used in the textile and leather fields to evaluate the color fastness of dyes. The light pressure exerted by the machine was found to be ideal for the purpose. A dark green felt billard cloth was selected as the abrading fabric. This material has the proper abrasive surface plus the added advantage of a contrasting color against which the white dust formed during the test is easily detected.

#### Instrument Test Described

The "Crockmeter"\* works on the simple principle of passing a weighted wooden bar back and forth across the sample. The machine as supplied is hand operated and a counter is attached to the crank to record the number of cycles. The point of contact with the sample is a wooden dowel 5% inches in diameter which protrudes from the weighted bar. A pad of green billiard cloth† two inches square is clamped over the dowel.

The floor wax to be tested

is applied to a 3" x 6" piece of black rubber tile following the directions given in Federal Specification PW-155; 4.3.6.1: This method calls for a 0.4 cc sample to be applied over an area eight inches square and gives a 2" x 4" test surface. The samples are allowed to dry for 24 hours at 77°F and 55 per cent relative humidity. Powdering is then checked at both 77°F and 50°F, with the latter sample being conditioned for one hour at room temperature before testing.

The coated floor tile is placed on a sandpaper pad to prevent slippage and the weighted dowel is passed over the sample for 50 complete cycles. The five inch stroke overlaps the sample by one-half inch at each end. This is helpful since the abraded material collects at the end where it can be more accurately judged.

Figure 2 shows the difference between powdering and nonpowdering formulas.

Certain subjective elements are, of course, present in assessing the results of this test. For example, with hard-gloss formulations powdering is most evident on the tile, with some dust showing on the felt surface. With buffable formulas, the opposite is true and the felt pad collects most of the abraded material. Once this distinction is made, however, fairly subtle judgements can be made as to the degree of powdering. Our classification method, based on observation of both the tile and felt pad is as follows: None (N); Very Slight (VS); Slight (S); Poor (P); Very

Figure 2. Powdery formula at left; non-powdering formula at right.



Poor (VP); and Extremely Poor (VVP).

#### Effect of Environment

During our early work with the "Crockmeter," the reproducibility of test results was poor. At that time we were not operating under controlled atmospheric conditions. Eventually the effect of these conditions was appreciated and tests were conducted under controlled temperatures and relative humidity. Reproducibility became excellent once these provisions were made.

A. Temperature: Field reports indicated that powdering is more pronounced at lower temperatures. This is logical since the friability of the thermoplastic ingredients of a floor polish increases as the temperature decreases. For this reason the test procedure is conducted at both 50 and 77°F. Note the effect of temperature on the results presented during the discussion.

B. Humidity: The effect of moisture was first noted when powdering tests were conducted at various time intervals after films had dried to hand touch. Figure 3 shows that a formulation which eventually will become non-powdering, actually does powder during the early drying stages. For this reason a 24 hour drying time at 55 per cent relative humidity was specified for the powdering test procedure. The implication is apparent, though not yet proven, that formulas which may be borderline in respect to powdering could dust under high humidity conditions.

C. Substrate: In all our tests, similar results were obtained on vinyl, rubber and linoleum surfaces. Asphalt tile gave variable results under test conditions and

Table I. General Formula— Emulsion Floor Polish Parts by Wgt., Solids

Polymer	50-75
Resin	10-30
Wax	10-20
Plasticizer	
(Leveling Agent	) 3-7

<sup>\*&</sup>quot;Crockmeter" is available from Assn. of American Textile Colorists and Chemists, Box 28, Lowell, Mass.

<sup>†</sup>Green billiard cloth used in tests was 670 Kelly #720 supplied by Commonwealth Felt Co., Summer St., Beston.

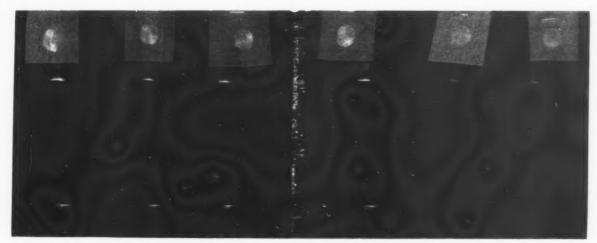


Figure 3. Effect of drying time on powdering, left to right: 1 hour, 2 hours, 3 hours, 4 hours, 5 hours, 6 hours,

is discussed in greater detail later in the paper.

#### Variations in Compositions

Many modern water emulsion polishes fall within the general formula shown in Table I.

Using newly developed test procedures as a guide, each of these major components was checked as to its effect on powdering.

A. Polymers: Polystyrene and polyacrylates are the favored polymer bases for hard gloss polishes. The former are exclusively non-film-forming, while the latter may or may not be, depending upon the type of acrylic ester used. Non-filming polystyrenes and acrylates are very hard and contribute appreciably to the durability of finished formulations. In order to form continuous films, a matrix must be provided in which the dispersed particles of polymer are embedded. Previous work with the electron microscope (1) has shown that polymer particles retain their identity when mixed with resins, waxes and plasticizers which form the binder. This being so, polymers per se should not have any influence on the powdering of a given formulation. To check this point, a series of tests was made with a polystyrene polymer which pow-

I, "Floor Finishes Rased en Polystyrene Emulsions" R. M. Avery Jr. and L. H. Perry. Soap and Chemical Specialties, February. 1958.

Table II. Powdering Tests—Polymer-Resin Type Formulations

		Parts by	Volume	
Polystyrene @ 14% Shellac, ammonia cut @ 14% "KP-140"* "Benzoflex P-600"**	10 90 1	50 50 1	90 10 1	90 10 1 2
Powdering				
50°F 77°F	None None	None None	F to P	None

dered readily when not properly compounded. Shellac and plasticizer (s) made up the remainder of the formula. The polymer-shellac ratio was varied from 10-90 as shown in Table II, and the formulas were tested for powdering using the new U B S procedure. Only at 90 per cent polymer levels did powdering become evident and the use of additional plasticizer overcame this condition. This indicates that the components of the matrix, rather than the base polymer, more significantly affect the powdering tendency of a formula.

B. Resins: To assess the effect of various resins on powdering, a basic formula was selected as shown on Table III. To this formula was added one part of "Benzoflex P-600"\*\* plasticizer.

#### Table III. Basic Formula Used in Powdering Tests

Parts by volume

Polymer	
(Polystyrene) @ 14%	65
Resin Plasticized @ 14	25
Polyethylene @ 14%	10
"KP-140"*	1

<sup>\*</sup>KP-140 is available from Ohio Apex Division of Food Machinery & Chemical Corp., Nitro, W. Va.

"Shanco L-1001"\*\*\*, "Lytron 822"†, "Durez 15546,"\*\*† and shellac were tested as the resin portion. The film-forming resin types such as shellac showed no powdering when cut with ammonia alone. The hard, non filming resins require a fatty acid plasticizer to prevent powdering. Our conclusion is that properly plasticized alkali-soluble resins are, in general, not significant factors in the control of powdering.

C. Plasticizers: The function of a plasticizer in polymer-based floor polishes is two-fold. First, it softens the matrix sufficiently to render it a proper film-forming vehicle for the polymer and secondly, it acts as a leveling agent. As noted previously it does not disturb the symmetry or hardness of the polymer particles. It would appear then that the choice and amount of plasticizer has a definite

<sup>\*\*</sup>Benzoflexes available from Tennessee Products & Chemical Corp., Nashville, Tenn.

<sup>\*\*\*</sup>Shanco L-1001 is made by Shanco Plastics and Chemicals, Inc., N. Tonawanda, N. Y.

<sup>&</sup>lt;sup>7</sup>Lytron <sup>§</sup>22 is rvailable from Monganto Chemical Co., St. Louis,

<sup>\*\*†</sup>Durez 15546 is available from Durez Plastics Division, Hooker Chemical Corp., N. Tonawanda, N. Y.



The success of Tris Nitro is due to the slow release of bactericidal and fungicidal decomposition products, including formaldehyde. Tris Nitro offers sustained protection for extended periods with no indication of development of resistance. Recent experiments show that formaldehyde is also released at high humidities and high ambient temperatures in the presence of a trace of alkaline material. Tris Nitro is a powerful inhibitor of microorganisms,

and in dry form should be evaluated to protect packaged goods from mold attack during shipment and storage.

#### PHYSICAL PROPERTIES

THISTERE TROTERI	Ba of
Formula	(CH2OH)3 CNO2
Molecular Weight	151.12
Melting Point, °C	165-170d
pH of 0.1M Aqueous Solution	5.6
Solubility in Water g/100 ml at 20°C	220
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Table IV. Effects of Various Plasticizers on Powdering

Basic formula plus additional plasticizer	Parts	Powd	ering
		50°F	77°F
None	_	VVP	VP
Benzoflex P-600"**	1 Part	None	None
"Benzoflex P-400"**	1 Part	S	None
"Stysolac AW"tt	1 Part	S	VS
"Benzoflex P-200"**	1 Part	VVP	VP
"Benzoflex 9-88"**	l Part	VVP	VP
Dibutyl phthalate	1 Part	VVP	VP

<sup>††</sup>Stysolac AW available from F. H. Paul & Stein Bros., New York, N. Y.

effect on powdering. This has been verified experimentally.

The most widely used plasticizer for polymer based systems has been "KP-140." Many excellent non-powdering formulas have been made with this material as the sole plasticizer. However, given a inherently formulation which powders, the use of increasing or decreasing amounts of "KP-140" will not correct the situation. It has been found, however, that the use of an additional plasticizer will, in the majority of cases, completely overcome the powdering problem.

As an illustration consider the formula in Table III in which shellac is the resin. The base formula containing one part "KP-140" only was found to powder badly. To this formula was added in turn one part of several different plasticizers. Table IV shows the results of powdering tests with this series.

"Benzoflex P - 600" performed best of those tested. The efficiency of this material was further demonstrated by preparing formulas based on six different polystyrene polymers. All formulas with "KP-140" as the sole plasticizer powdered to some extent, some quite badly. The addition of one part of "Benzoflex P-600" completely corrected the powdering problem in every case.

It was of interest to determine the maximum and minimum amounts of "Benzoflex P-600" which were effective in correcting powdering. Again using the basic formula of Table III, containing shellac and one part "KP-140," increasing amounts of "Benzoflex P-600" were added and each formula checked with the "Crockmeter" (Table V).

Table V. Effect on Powdering of Various Increments of "Benzoflex P-600"

P-600"**	Powe	lering
Parts	50°F	77°F
0.0	VP	P
0.3	F to P	F to P
0.5	F	G
0.7	VG	None
0.9	None	None
1.1	VG	None
1.3	VG	G

In this particular formula 0.9 per cent "Benzoflex P-600" was the most effective level. The above results hold for single or multiple coats on vinyl, rubber and linoleum substrates. On asphalt, powdering was noted at all "Benzoflex P-600" levels when one coat was used; it disappeared after multiple coats were applied. The reason for this anomalous result on asphalt is felt to be the uneven, porous surface presented by this material. The poor fill and sharp edges cause much more abrasion than smooth

surfaces. In this respect also, the results with the "Crockmeter" parallel those experienced in the field.

Incidentally, a full benchscale evaluation of the formulations listed in Table V was carried out. None of the other properties (gloss, wet abrasion, water spot, removability, hazing, crazing, tack and leveling) were adversely affected by the addition of "Benzoflex P-600."

D. Waxes: In hard gloss formulas the wax content is generally in the range of 10-15 per cent of the total solids. In this area the commonly used waxes, either natural or synthetic, have little or no effect on powdering tendencies.

In high wax formulations, however, the wax can have an important effect on powdering. One of the most useful materials, particularly in combination with polymers, has been polyethylene. It has been found, however, that more than 20 per cent polyethylene in a buffable polish results in powdering. This is true for both polyethylene-polymer types and classic non-polymer formulations. It is also true that high polyethylenepolymer polishes will powder whether the polymer is polystyrene or polyacrylate and whether or not the polyacrylate is film-forming.

Table VI shows the effect of increasing the polyethylene content in a polymer-based polish from 10-30 parts; polymer content was decreased in reverse proportions. Note the very poor powdering at 30 per cent polyethylene (powdering is also evident at 25 per cent). Increasing the "Benzo-

(Turn to Page 111)

Table VI. Effects of Increasing Polyethylene—Powdering Tests

		Parts by	Volume	
Polymer (Polystyrene) @ 14%	65	55	45	45
Shellac, ammonia cut @ 14%	25	25	25	25
Polyethylene @ 14%	10	20	30	20
Carnauba @ 14%	-	No.		10
'KP-140''*	1	1	1	1
"Benzoflex P-600"**	1	1	1	1
Powdering				
50°F	None	None	VVP	None
77°F	None	None	P-VP	None









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# Fly Control in Oklahoma

O present a clear cut picture of fly control in Oklahoma it will be necessary to separate the flies into four groups: house flies, horn flies, stable flies, and horse flies. Because of the varied biologies and ecological habitats, control procedures effective against one group are almost useless against others.

#### **House Flies**

In limited areas of western Oklahoma and the Panhandle, DDT is still essentially as effective as it has ever been. Almost no resistance is evident. In other parts of the state the usual chlorinated hydrocarbon insecticides are seldom used for more than the first spraying in the spring. As in most other sections, strains of flies resistant to DDT, BHC, chlordane, dieldrin and related insecticides first appeared in 1948, developed in rapid progression.

At the present time malathion is the most widely used residual insecticide followed closely by "Diazinon" and "Korlan". During the cooler months of the fly season residual organic phosphate sprays are used almost exclusively. Sugar is seldom added to the spray to enhance its action. As the season gets warmer and the flies prefer to spend more time on the floors, window ledges, and similar areas, poison baits are widely used. Sugar baits are used in well kept barns, around the home or store while the other baits are used on dirt or straw where the sugar would quickly filter down and be unavailable to the flies. Syrup baits painted in

By D. E. Howell\*,

Department of Entomology, Oklahoma State University, Stillwell

strips have not been widely used nor have water baits.

Parathion or "Diazinon" impregnated cords are not extensively used for housefly control in Oklahoma. They are of some value during the spring and fall months but during the hot dry summer months control is not adequate and very few properties are protected with impregnated strings.

Space sprays with synergized pyrethrins or "Lethane" are widely used in dairies where residue problems prevent the use of longer lasting insecticides. With the increase of organic phosphate insecticide resistance, space sprays are being used more widely.

Lindane vaporizers were used extensively for a brief period

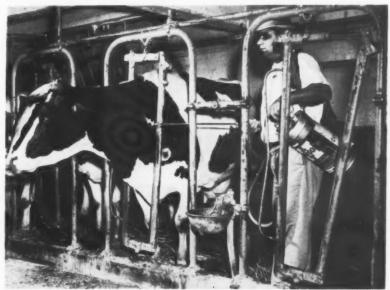
3Registered trade name of Rohm & Haas Co., Philadelphia.

but now they are seldom found in buildings that are not air conditioned. The rapid movement of air through open windows and doors of non-air conditioned buildings sweeps lindane vapors away before lethal concentrations build up. In addition, insect resistance to lindane is highly developed in most areas.

Sanitation is widely recommended for larval control and, where practiced, improvement is apparent in many areas. When it is impossible to remove the breeding media, covering the surface with calcium cyanamid provides good control of the larvae and enhances the value of the fertilizer. Insecticides are seldom used for the treatment of manures.

Control of house flies in food processing areas such as creameries, milk rooms, bakeries and similar places has always been a problem. Toxicants are not wanted because of the residue hazard and because flies dying

"Space sprays with synergized pyrethrins or 'Lethane' are widely used in dairies. where residue problems prevent use of longer lasting insecticides."



1"Diazinon" is a registered trade name if Geigy Chemical Corp., Ardsley, N. J.

<sup>2</sup>Registered trade name of Dow Chemical Co., Midland, Mich.

\*Paper presented during 45th mid-year meeting, Chemical Specialties Manufacturers Assn., Chicago, May 19, 1959.

## B.F.Goodrich Chemical raw materials



Combining the ingredients that produce the best sheen on sterling silver is often a problem for the polish maker. In this case, the separation problem couldn't be solved satisfactorily by homogenization or colloid milling — and a number of products tested could not prevent the separation without making the emulsion too thick for easy use.

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from insecticides often drop into the food. Recent developments of repellents such as Phillips\* experimental repellent "1209" will provide long lasting protection. Fabrics dipped in one per cent solution of "1209" were almost completely repellent to large populations of house flies for more than 30 days. Hog houses treated with the same material had less than 10 per cent as many flies as the untreated checks at the end of 40 days. Showcases painted with the repellent were free of fly specks for three weeks.

These materials are not available in the stores but considerable interest in obtaining them has been shown by many people who have seen the experimental work.

#### Stable Flies

Stable flies often become very numerous in Oklahoma, making control procedures essential. Because of the association of stable flies with cattle in fields as well as in feed lots, dry lots and barns, residual treatment of barns is seldom adequate. Usually only favored resting places around the barns are treated. These differ with the temperature. During cool weather the resting flies are usually found in the sun protected from the wind. During hot periods stable flies seek shade and a breeze. Because they move very little while resting and digesting their blood meal, residual sprays must be applied more thoroughly. When flies are numerous, spraying of favored resting places is helpful. Space sprays with synergized pyrethrins are seldom effective against stable flies because they usually do not rest in areas that can be closed and treated with a fine spray or aerosol. When fly populations are moderate, the insecticides are usually applied to the animals; if flies are numerous, animals and their environs are sprayed.

Current regulations provide for applying to milking animals sprays containing only synergized

pyrethrins, "Lethane" or "Thanite"4. The addition of repellents to these sprays is increasing rapidly and many dairymen are convinced that repellents extend the protection provided by the knockdown agents and are well worth the extra cost. A recent survey in south central and east central Oklahoma indicated that over 60 per cent of the dairymen who had used repellents in combination with pyrethrins or "Lethane" continued to use such combinations even though the sprays were appreciably more expensive.

Because stable flies breed in a wide range of media, both around the barn and out in the field, the usual sanitary measures are less effective in reducing their numbers than they are in cutting down house fly populations.

#### Horn Flies

Horn flies breed only in fresh droppings and mainly are pests of the range and pasture. They are only slightly affected by the usual sanitary measures. Flies on dairy animals can be controlled by synergized pyrethrins and repellents, applied several times a week, or by methoxychlor powders. Range animals are protected by sprays of DDT, "Toxaphene" or methoxychlor in the eastern portion of the state. In the open pastures of western Oklahoma most beef animals have access to rubbing devices charged with "Toxaphene" or DDT. A recent survey showed that over 90 per cent of the cattle in the western half of the state had access to rubbing posts. In eastern Oklahoma rubbing devices are less widely used, presumably because the more heavily wooded pastures offer many other opportunities for the animals to rub themselves. The type of rubbing device used has little influence on horn fly control. An extensive test by the Oklahoma Agricultural Experiment Station using over 6000 "posts" representing all of the common patterns failed to show that any device was appreciably better than others.

Home-made rubbing posts costing less than \$10.00 were as effective as any commercial device tested.

The solvent for the insecticide was important. During the warm summer months some animals were "burned" when Diesel fuel or number 2 fuel oil served as the solvent. No burning was noted when lubricating oils were used. Non-detergent, inexpensive, highly refined oils of approximately SAE 30 weight are suggested.

The recently developed systemic insecticides such as "Co-Ral"5 or "Trolene"6 are effective against horn flies but seldom are used exclusively for their control. Because of the cost of these materials, ranchers use them to control cattle grubs and other pests. Time of treatment is selected to take care of the most serious pests and grubs. For example, in areas where screw worms are expected, treatment takes place in September and both screw worms and grubs are controlled. If horn flies are considered more important than screw worms the systemic is applied in June. This reduces the number of applications needed for horn flies.

For a brief period many treadle operated, or "electric eye" operated sprayers were placed so that cattle treated themselves while going to or from water or feed. Very few of these sprayers are still in use. Objections to them are the problem of maintenance and the tendency of the wind to blow the finely divided spray away before it could reach the animal.

#### Horse Flies

Horse flies are serious pests and are very difficult to control. Recent studies indicate that three of the five most important species breed in relatively dry areas and are seldom associated with free water. As a result it is very difficult to attack the larvae.

Adult control by spraying with synergized pyrethrins is economically feasible for dairy cattle,

<sup>\*</sup>Phillips Petroleum Co., Bartlesville, 4Registered trade name of Hercules Powder Co., Wilmington, Del.

<sup>5</sup>Registered trade name of Chemagro Corp., Kansas City, Mo. 6Registered trade name of Dow Chemical Co., Midland. Mich. (Turn to Page 110)

# Shanco Levelling Agents

Shanco offers a series of alkali soluble resins for use as levelling agents in bright drying floor polishes. These resins all show excellent gloss and levelling properties. They vary in melting point to permit adjustment of film characteristics such as hardness and toughness of films. Any tendency toward powdering and flaking off may be overcome by the use of the proper levelling resin in the correct amount.

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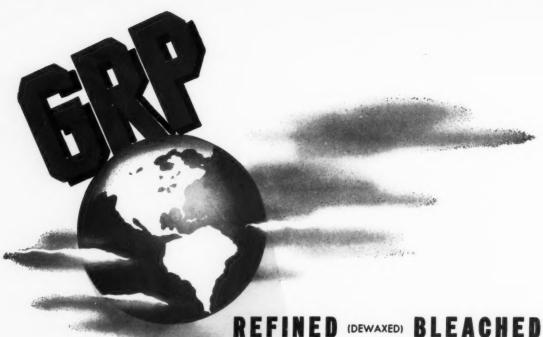
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# Auto Cooling System Corrosion

in Glycol Antifreeze Solution

By M. A. Boehmer and J. W. Compton\*

Wyandotte Chemicals Corp. Wyandotte, Mich.

ANY automotive and metal industry publications have predicted an increase in the use of aluminum in the transportation field. This tendency will be the result of improved technology, production, and various economic factors. For this trend toward increased aluminum use, the mass-produced automotive engine presents an attractive target. This was disclosed by Thomson and Caris at a recent meeting of the Gray Iron Founders Society (1).

These investigators pointed out that an aluminum engine could weigh 200 pounds less than its cast iron counterpart and that this lighter engine would provide better weight distribution, and require lighter supporting structure, tires and brakes. One of the many problems to be considered in building an all aluminum engine is the corrosion which might occur in the cooling system. The corrosion of metals in glycol antifreeze solutions has been invesigated by many (2,3,4,5,6,7). The majority of these reports have confined themselves to laboratory investigations.

A properly designed laboratory test can only provide sufficient data to justify the more realistic evaluations of the apparently acceptable antifreezes. The final evaluation of any antifreeze must be based on field test experience (8,9). For this reason, it was considered necessary to use laboratory, simulated service, and field test data to determine what degree of aluminum corrosion will be encountered by future vehicles. This study included various glycol antifreezes and waters of different quality as the main variables.

Fourteen antifreezes, commercially available in the Detroit area, were tested by an accepted laboratory method using Detroit tap water and 100 ppm chloride-200 ppm sulfate test water. Corrosion as a function of dilution was investigated. Chlorides and sulfates have long been established as water contaminants which aggravate cor-

rosion (10,8). For this reason, a chloride-sulfate test water and several other test waters were used in the ASTM test.

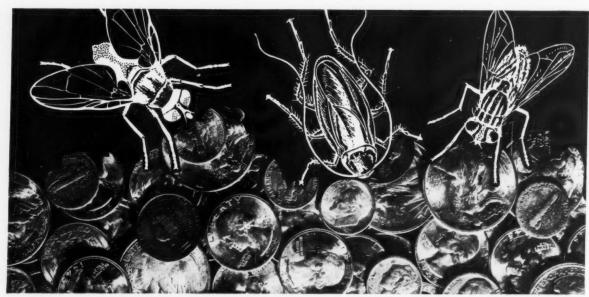
Based upon the laboratory data, six antifreezes were considered representative of the fourteen. These six were tested further by a simulated service test and duplicate fleet tests in an effort to establish a correlation between the laboratory tests and realistic corrosion evaluations. It was not the objective of this study to imply that any antifreeze is unsatisfactory for present day use. Certainly all the products sampled have been thoroughly tested and consumer accepted for many years. The

Table I. Synthetic Corrosion Test Based on Analyses of Water from 141 Major Cities

			Analys	ses in l	Parts Pe	r Millio	n (PPM	)	
Type Water	1	2	3	4	5	6	7	8	9
Bicarbonate	Dist.	80		126	152	76	76	300	176
Calcium	H <sub>2</sub> O	26	-	84	30	26	26	26	111
Carbonate	-	_		-			576		
Chloride		8	100	208	422	508	508	8	8
Iron		Tr.1	0	Tr.	Tr.	Tr.	Tr.	Tr.	Tr.
Magnesium		8		33	10	8	8	8	35
Nitrate		-		Tr.2	3.5	Tr.	Tr.		Tr.
Silica		2		2	31	2	2	2	2
Sodium	-	4	137	89	305	330	605	91	40
Sulfate		19	200	119	1	19	19	19	319
Sulfide				2.5					
Total Hardness		96	Procedure new	347	115	100	100	98	414
Dissolved Solids		125	532	668	1010	1006	1733	200	675
pH Range	6-7	7-8	7-8	7-8	758.5	6.0-7.0	10-11	7-8	7-8

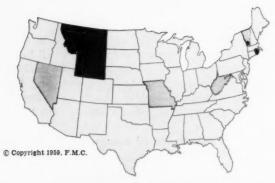
<sup>1 0.05</sup> ppm Iron 2 0.22 ppm Nitrate

<sup>•</sup>Paper presented at the 45th midyear meeting, Chemical Specialties Manufacturers Ass'n, Chicago, May 19, 1959.



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In a recent nationwide survey† leading Entomologists reported flies and roaches have "learned-to-live" with many widely used insecticides. Once powerful formulations no longer prove fully effective. Worse, each new insect generation becomes more and more immune.

If your insecticide sales have slumped, blame the resistant insect! It's time to take 'him' seriously. The survey showed that formulations with PYRENONE\* offered long range effectiveness and high killing power, are non-toxic to humans and warm blood animals. Pyrenone, a combination of pyrethrins and piperonyl butoxide, proved to be the safest, surest, most economical insecticide base. It's time to put performance...and profits, naturally...back into your insecticides. Reformulate with Pyrenone.

#### KEEP YOUR INSECTICIDES MARKETABLE

- Periodically check insect resistance to your products.
- Tailor your formulations to meet specific needs.
- Prescribe proper application methods.
- Reformulate to include Pyrenone.

Let your Fairfield representative help solve your insecticide sales problem. Contact him today!





FOOD MACHINERY AND CHEMICAL CORPORATION

**Fairfield Chemicals** 

Sales Headquarters

441 LEXINGTON AVENUE, NEW YORK 17, N.Y.

Branches in principal cities. In Canada: Natural Products Corporation, Montreal and Toronto.



Table II. Corrosion Losses on Aluminum and Ferrous Metals in Antifreeze Solutions of Various Test Waters ASTM-D-1384-55T Method

		Lo	Losses in Average Milligrams per Specimen									
Type of Water		l Distilled	l Distilled	l Distilled	2 Detroit Tap Water	3 100 ppm Cl 200 ppm SC						
Antifreeze	, % Soln.	10	20	33-1/3	33-1/3	33-1/3						
Antifreeze Tested	Metals											
A	Aluminum Ferrous	8 21	2 + 4	+ 2	15 2	6 4						
В	Aluminum Ferrous	17 6	20 + 4	+ 13 + 1	9 + 2	11 + 4						
С	Aluminum Ferrous	18 490	45 127	76 2	29 45	52 147						
D	Aluminum Ferrous	23 169	17 136	38 30	28 141	151 605						
E	Aluminum Ferrous	38 272	7 229	6 123	28 120	77 623						
F	Aluminum Ferrous	5 153	17 67	6 90	18 40	140 771						
G	Aluminum Ferrous	8 305	11 23	2 3	25 71	43 1104						
Н	Aluminum Ferrous	38 232	17 121	36 12	22 56	174 146						
I	Aluminum Ferrous	+ 3	3 + 2	0 + 1	1 + 0	55 25						
1	Aluminum Ferrous	30 237	31 36	49	23 55	150 131						
K	Aluminum Ferrous	62 244	48 38	7 3	7 27	97 101						
L	Aluminum Ferrous	15 500	21 207	28 10	5 + 0	83 331						
М	Aluminum Ferrous	21 625	14 321	6 108	15 10	28 1012						
N	Aluminum Ferrous	29 82	6 + 6	3 7	2 24	29 86						

Test Results It is noted in Table II that all the antifreezes gave good corrosion protection in the 331/3 per cent solutions of both distilled and Detroit tap water. On the basis of these data each would be considered acceptable for use on the basis of the ASTM interpretation of test results (9). With the exception of Antifreezes A. B. and I the corrosion rates increased considerably as the antifreeze solutions became more dilute. Corrosion trends, as a function of dilution, are shown in Figures 2 and 3. High corrosion

> rates on aluminum and ferrous metals, are always accompanied by severe pitting. The degree of pit-

1. Light was excluded from the

test solutions to avoid any light

catalyzed reactions (11,12). Fourteen samples of commercially available glycol antifreezes from the Detroit area were obtained. Each of these was tested in 10, 20, and 33½ per cent distilled water solutions. Also used were 33½ per cent solutions of Detroit tap water, and a 100 ppm chloride-200 ppm sulfate test water. Although six types of metal specimens were used as specified by the ASTM method, only the aluminum and ferrous corrosion data are reported here.

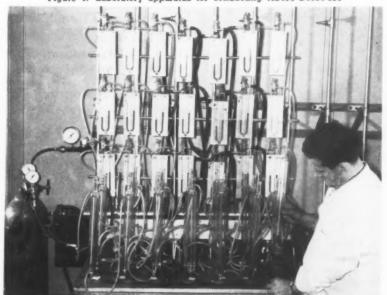
prime purpose was to present a realistic evaluation of the corrosion which may be encountered by using aluminum components in automotive cooling systems.

#### **ASTM Laboratory Test**

#### Apparatus and Methods

The ASTM D-1384-55T Corrosion Test was selected as the laboratory screening test for this study of aluminum and ferrous corrosion in the automotive cooling system. The reproducibility and interpretation of test results for this method have been established and the method is in wide use. The ASTM method was modified by the use of various test waters as noted in Table I. The test apparatus is shown in Figure

Figure 1. Laboratory apparatus for conducting ASTM D1384-55T





Stop worrying about its fragrance ....

12

# DO SOMETHING!

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You've got to think of fragrance in any household product you're trying to sell today! Whether it's cleaning compounds, insecticide or furniture polish it must be pleasant to use in the home.

The VAH perfume chemists are skilled and experienced in applying the psychology of scent to every type of product  $\dots$ 

Let us help you produce a better selling item with fragrance . . . the hidden sales persuader.

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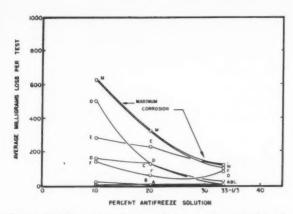


Figure 2. Effects of antifreeze dilution on the corrosion of ferrous metals in glycol antifreeze solutions. ASTM D-1384-55T corrosion test type I distilled water.

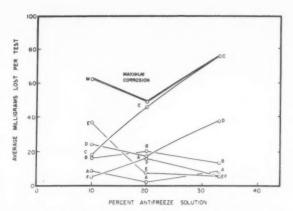


Figure 3. Effects of antifreeze dilution on the corrosion of SC64C aluminum in glycol antifreeze solutions. ASTM D-1384-55T corrosion test type I distilled water.

ting is reflected by the magnitude of corrosion losses and therefore need not be discussed at this time.

Detroit tap water, as compared to distilled water, slightly increased corrosion rates in general, although in certain cases the rates declined. When the 100 ppm chloride-200 ppm sulfate test water was used in the ASTM test the corrosion rates increased for most antifreezes. These data were the most informative regarding corrosion protection. It was on the basis of the chloride-sulfate corrosion data that the Antifreezes A. B. C. and D were selected for additional laboratory testing with other type waters. We found these antifreezes representative of the types and levels of corrosion protection of the 14 antifreezes.

Table I lists the analyses of the test waters used in this corrosion study. They represent a compromise of various waters from 141 major U. S. cities (13). These waters provide a fairly realistic environment for antifreeze corrosion studies.

In Table III a summary is shown of the corrosion results obtained on representative antifreezes A, B, C, and D using test waters listed in Table I. Distilled water and Detroit tap water were tested without antifreeze and very high corrosion rates on ferrous metals were obtained in one-half the normal test time. In the low chloride waters aluminum appeared fairly

well protected. High aluminum corrosion rates were observed in high chloride waters and appeared to some extent proportional to the chloride content. Ferrous corrosion did not set a decided trend but appeared to be affected by both chlorides and sulfates, depending on the antifreeze characteristics. The antifreezes A and B, although providing better corrosion protection than C and D, exhibited a

decrease in aluminum protection as the chloride content increased. These trends in aluminum and ferrous corrosion are shown in Figures 4 and 5, as a function of the chloride ion content of various test waters.

The true significance of these laboratory data is difficult to ascertain without establishing a correlation. The need for a correlation of laboratory data was anti-

Table III. Corrosion Losses on Aluminum and Ferrous Metals in Antifreeze Solutions of Various Test Waters ASTM-D-1384-55T Method

	Type Water	% A. F.	A. F.				anti	freezes	
N	o. Ions (ppm)	Solution	Metals		A		B	C	D
1	Distilled	33-1/3	Aluminum Ferrous	+	8 2	+	13	76 2	38
2	Detroit Tap Water	33-1/3	Aluminum Ferrous		15 2	+	9	28 45	141
3	100 Cl, 137 Na 200 SO <sub>4</sub>	33-1/3	Aluminum Ferrous	+	6	+	11	52 147	151 605
4	208 Cl, 126 $\rm HCO_3$ , 33 Mg, 89 Na, 119 $\rm SO_4$ , 84 Ca, 3 S	33-1/3	Aluminum Ferrous		15 3		22 0	175 + 1	257 23
5	422 Cl, 152 $\rm HCO_3$ , 10 Mg, 3.5 $\rm NO_3$ 3.5 Na, 31 Si, 30 Ca, 305 Na,	33-1/3	Aluminum Ferrous		52 17	1	03	330 + 3	342 10
6	508 Cl. 76 HCO <sub>3</sub> , 330 Na, 19 So <sub>4</sub> , 27 Ca	33-1/3	Aluminum Ferrous	]	171		73 3	371 9	359 65
7	508 Cl, 76 HCO <sub>3</sub> , 605 Na, 19 So <sub>4</sub> , 576 CO <sub>3</sub> , 26 Ca.		Aluminum Ferrous	]	00	1	83 10	334	_
9	300 HCO <sub>3</sub>		Aluminum Ferrous		12		10	_	_
9	319 SO <sub>4</sub> , 176 HCO <sub>3</sub> 33 Mg, 111 Ca		Aluminum Ferrous		3		1 2	5 182	22 472
*	Distilled	-	Aluminum Ferrous		23 76				
2*	Detroit Tap Water	-	Aluminum Ferrous	9	808				

<sup>\*</sup> Test time shortened one-half (118 hrs.)

# Polishes made with Epolene E beauty of the surfaces they cover

Water-white Non-yellowing

Take a floor...of wood or resilient material...apply a polish formulated with Epolene E and see how the floor's beauty and color come to life.

The explanation lies in Epolene's ability to produce low-color films of wax of brilliant clarity. What's more, Epolene wax films stay that way-neither darkening nor turning yellow.

But Epolene means more than beauty. It's practical as well. Properly formulated polishes containing Epolene provide a gloss that actually increases with wear and rebuffing. Add durability plus resistance to water spotting, low dirt-pickup and skid resistance, and it's easy to see why more and more leading formulators are basing their polishes on Epolene E.

Epolene E is an emulsifiable, low-molecular weight polyethylene wax. It is carefully manufactured under a precise system of quality control to assure a consistently superior product. As a result, polish manufacturers can standardize formulations with assurance of batch-to-batch uniformity.

Epolene is also available with the same high quality characteristics in a non-emulsifiable form-Epolene N-for use in paste polishes.

The facilities and staff of Eastman's technical service laboratory are available to manufacturers interested in Epolene's particular advantages in polish formulations. For more information and samples, write EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of Eastman Kodak Company, KINGSPORT, TENNESSEE.

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; Atlanta; Chicago; Cincinnati; Cleveland; Detroit; Framingham, Mass. Greensboro, N. C.; Houston; New York City; St. Louis. West Coast: Wilson Meyer Co., San Francisco; Los Angeles; Portland; Salt Lake City; Seattle.

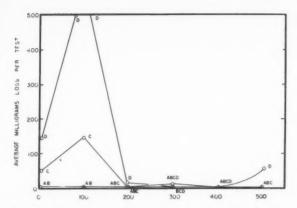


Figure 4. Chloride ion effects on ferrous corrosion in  $33\,\%$  per cent glycol antifreeze solutions of various test waters. ASTM D-1384-55T corrosion test.

Figure 5. Chloride ion effects on aluminum corrosion in 33½ per cent glycol antifreeze solutions of various test waters. ASTM D-1384-55T corrosion test.

cipated in the planning of this study. In the original procurement of the products, two case lots were obtained on several of the antifreezes. Excess material was used in storage stability studies. This method excluded the possibility of testing two or more production variations of the same brand. Sufficient quantities of antifreeze were therefore available to be tested by the more realistic methods of simulated service and actual fleet tests. However, certain general conclusions or trends can be taken from the laboratory data.

#### Lab Test Conclusions

- Chlorides present in water significantly increase the corrosion rate of aluminum in the majority of glycol antifreeze solutions.
- Ferrous corrosion increases as the chloride increases to approximately 100 ppm and then declines as the chloride approaches 200 ppm.
- Above 200 ppm chloride, aluminum corrodes at a greater rate than ferrous metals.
- High sulfate (300 ppm) contamination, in the absence of chlorides, causes high ferrous corrosion rates.

The above conclusions from the laboratory data indicate that high chloride content in water seriously increases the corrosion rate of aluminum and ferrous met-

als. The problem appears somewhat less serious when the quality of the U.S. water supply is taken into account. Figure 6, based upon 1952 U. S. Geological Survey figures for 89 million people in 141 major cities, indicates that only 2.1 per cent of the people use water over 100 ppm chloride and that the major portion of these are west of the Mississippi where lesser quantities of antifreeze are used. It is an educated guess that the majority of the people in areas of corrosive water supplies have been taught by experience to use special corrosion inhibitors or rain water from the cistern.

(To be Concluded)

#### Acknowledgements

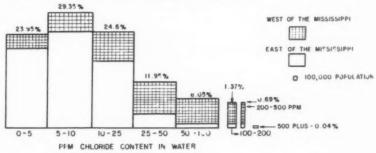
Thanks are due to Mr. C. Durbin, Staff Project Engineer, Chrysler Corporation, for his cooperation in obtaining the water survey data and test water compositions. Thanks are also due to L. J. Adams and C. B. Brake for recording much of the data.

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Figure 6. Chloride content of U.S. water supply based on population serviced in 141 major cities totaling 89.000,000 population.





The Shell chemicals listed below are used in the manufacture of many important drugs and cosmetics.

#### Take a closer look . . .

This portrait of a common garden flower, the petunia, shows how much more we may see in a familiar plant on close examination. Throughout the ages, flowers have been both an inspiration and challenge to scientists. Only recently have chemists succeeded in synthesizing pleasing perfumes that rival the fragrance of flowers.

Although the chemicals listed at the right are familiar, it may pay you to take a *closer* look at them. They are available in quantities from a drum to a tank car.

Write your nearest Shell Chemical district office for samples and technical literature.

### SHELL CHEMICAL CORPORATION INDUSTRIAL CHEMICALS DIVISION

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Atlanta • Chicago • Cleveland • Detroit • Houston • Los Angeles • Newark • New York • San Francisco IN CANADA: Chemical Division, Shell Oll Company of Canado, Limited, Montreal • Toronto • Vancouver Acetone
Ethyl Alcohol
Glycerine
Hydrogen Peroxide
(including 90 per cent)
Ionol® CP
Antioxidant
Isopropyl Alcohol
Methyl Isobutyl
Carbinol
Methyl Isobutyl
Ketone
Tertiary Butyl
Alcohol

SOAP and CHEMICAL SPECIALTIES

#### CSMA Survey of Non-Food Aerosol and Pressurized Products Filled by 95 Manufacturers in 1958 and 92 in 1957 (1957 figures appear directly below those for 1958)

Number of Units Filled

	Motel Containers							
	Glass	Metal Containers						
Products	Containers All Sizes	16-ounce but over 12	12-ounce but over 6	6-ounce and less	Total			
Insect Sprays								
1. Space Insecticides	†	3,306,078	17,435,430	1,576,053	22,317,56			
2. Residual Insecticides (such as		3,088,153	20,698,639	2,094,887	25,881,67			
roach and ant sprays, etc. incl.		4 000 010	4.047.000	1 007 440	10,200,79			
insect repellents all types)	***	4,026,318 1,154,589	4,947,028 3,713,756	1,227,449 2,972,269	7,840,61			
3. Residual Insecticides — Plants								
(household and gardens)	* * *	3,112,673	1,392,563 1,105,130	381,005 183,027	4,886,24 1,945,799			
4. Mothproofers (including all fab-		657,642	1,105,130	103,027	1,5%5,75			
ric pests)		1,795,352	2,958,053	141,848	4,895,253			
, to pools,	***	1,835,247	3,995,300	109,227	5,939,774			
Coatings		1,000,21	-11					
5. Pigmented & Metallic Paints	†	17,342,231	6,910,895	2,961,342	27,214,468			
	***	15,089,859	12,101,791	3,334,304	30,525,954			
6. Clear Plastic Sprays	†	2,087,652	680,086	141,145	2,908,883			
	* * *	2,615,334	1,547,575	1,839,001	6,001,910			
Household Products				00 000 011	40 700 105			
7. Room Deodorants	†	2,330,006	10,649,968	36,800,211	49,780,185 41,988,888			
8 Fire Festivenishes	†	1,055,020	10,361,674	30,572,194	3,594,716			
8. Fire Extinguishers	†	2,732,995	861,721		2,391,832			
9. Snow, all types	* * *	2,219,226 2,722,542	172,606 3,471,689	584,921	6,779,152			
o, onew, an types	***	2,047,839	2,215,886	486,171	4,749,896			
10 Glass Cleaners	†	3,326,907	50,656	290,200	3,667,763			
	+	10,961,242	266,383	†	11,227,625			
11. Shoe or Leather Dressings	†	74,500	2,116,193	3,249,587	5,440,280			
		517,780	917,668	2,837,652	4,273,100			
12. Other Household Products								
(cleaners, all types such as								
metal, oven, rug & upholstery;	†	849,506	3,358,641	2,187,399	6,395,546			
waxes, water repellents, etc.)	†	735,144	3,134,415	1,635,744	5,505,303			
and the second second								
Personal Products		127,838	18,733,625	26,452,153	45,313,616			
13. Shaving Lather	†	127,030	9,399,209	41,469,078	50,868,287			
14. Hair Sprays & Dressings	Ť	20,561,135	18,994,413	53,038,044	92,593,592			
14. Hall opidyo d Diessings	1,406,729	12,060,459	28,850,599	52,114,170	94,431,957			
15. Dental Cream	†		+	12,905,832	12,905,832			
		Not Listed	Separately in 198	57 Survey				
<ol> <li>Medicinals and Pharmaceuticals (such as fungicides, burn treat-</li> </ol>								
ments, topical antiseptics, oral								
medicinals, anesthetics, antibio-	000 710	±	500 404	E CO1 474	7 120 600			
tics, etc.)	969,710 967,673	†	528,424 347,610	5,631,474 4,483,786	7,129,608 5,799,069			
17. Colognes & Perfumes	10,292,524	***		3,270,689	13,563,213			
17. Colognes & Fenumes	17,724,553	***	†	156,575	17,881,128			
18. Sun Tan Preparations	†	+	†	682,738	682,738			
iv. vali rail richardions			*	618,445	618,445			
19. Other Personal Products (such as	20,5							
shampoos, personal deodorants,								
hand lotions, powders, depila-	†	48,696	1,475,894	5,127,548	6,652,138			
tories, sachets, etc.)	1,180,487	†	1,625,970	3,177,205	5,983,662			

†Too revealing to be released.

(Continued on following Page)

#### 1958 Aerosol Sales (Continued)

#### Miscellaneous

- Veterinarian and Pet Products (such as shampoos, deodorants, insecticides, etc.)
- Miscellaneous Products (such as mildew, automotive not reported in categories 5 and 6, industrial lubricants and any others.)

TOTALS 1958 TOTALS 1957

†Too revealing to be released.

#### CSMA Meeting

(From Page 74)

title of a contribution by C. P. Argana of E. I. du Pont de Nemours & Co., read by Richard S. Seidel. A wide range of controllable water solubility and the ability to form films of outstanding tensile strength, grease and solvent resistance, and gas permeability make polyvinyl alcohol a

1,644,242 1.152.258 3 002 169 .... Not Listed Separately in 1957 Survey .... 3,911,616 6,349,513 1,198,618 11,459,747 5,235,558 8.143.429 2,256,893 15,635,880 11.262.234 68,561,714 102,559,034 159,000,514 341 383 496 21.279.442 59.273.092 108,597,640 150.340.628 339,490,802

material interesting to the specialties manufacturer, the speaker reported. The polymer is a disperserstabilizer, adhesive and binder, and is unaffected by greases, oils and solvents, according to Mr. Argana.

George L. Brown, Joseph Johnson, and Henry Schneider of Rohm & Haas Co., Philadelphia, coauthored a paper entitled "Polyacrylic and Polymethacrylic Acids, Salts, and Derivatives." Present polymers are useful as thickeners for bodying aqueous solutions or suspensions. The dispersant action of polyacrylates has helped them find their way into auto polishes, cleaners, and a number of other chemical specialties.

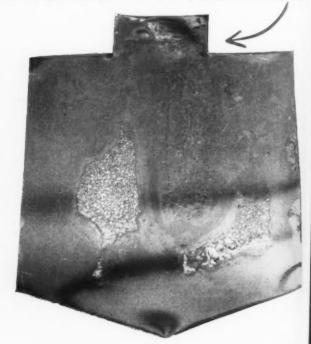
"Polyvinylpyrrolidone— Properties and Applications of a Versatile Polymer", by Julian L. Azorlosa, General Aniline & Film Corp., listed the following properties as the basis of PVP's com-

# New Detergent Speeds Metal Cleaning.

Cleaned with 5% heavy duty alkaline mixture (no surfactant)



Cleaned with 5% heavy duty alkaline cleaner containing 5% alkyl aryl sulfonate (active)



SOAP and CHEMICAL SPECIALTIES

mercial versatility: wide solubility and compatibility range, complexing and detoxifying ability, physiological acceptability, protective colloid action, film forming ability, and adhesive qualities. Final contribution in the symposium was entitled "Non-Ionic Water Soluble Resins", by S. G. Sellers and M. T. Ivison of Union Carbide Chemicals Co. It was delivered by Mr. Sellers.

#### Insecticide Division

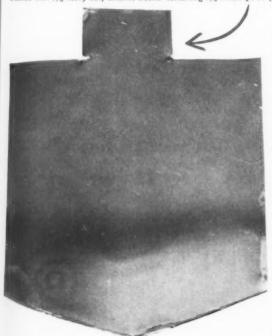
Highlights of the Insecticide Division's opening meeting on Tuesday morning, May 19, was a symposium on fly control with

Table 1. CSMA Survey of Household and Industrial Insecticide Sales 1958-1957 (1957 figures appear immediately below those for 1958)

Product	Data in Units				Data in Gallons
	Less than				Over one
	Pint	Pint	Quart	Gallon	Gallon
I. Space Sprays					
Primarily for knockdown application	828,688	11,037,225	4,041,715	373,825	274,963
	1,413,791	11,918,427	4,770,329	329,283	290,366
2. Residual Sprays					
Primarily for residual application	3,985,582	12,406,431	4,837,828	794,522	340,725
	4,187,161	9,689,611	3,235,259	498,854	192,685
3. Fabric Pest Sprays					
Products specifically intended for treating					
fabrics for moth and carpet beetle control	_	*	*	25,669	41,322
		*	*	22,051	36,581
. Livestock Sprays					
Oil base products to be used without					
dilution	*	*	88,924	668,948	825,168
	*	*	75,224	708,076	727,193
Livestock Emulsion Concentrates					
To be diluted with water	*	126,344	148,117	102,904	41,979
	10,446	118,257	176,359	113,917	37,563

### TRITON QS-15

Cleaned with 5% heavy duty alkaline cleaner containing 5% Triton QS-15 (active)



In controlled laboratory tests, mild steel panels coated with mineral oil (Bright stock) were rotated in detergent solutions for 5 minutes at 85° C.; rinsed in cold water and drained for 20 seconds. Residual oil was observed after spraying panels lightly with cold water.

Triton QS-15 improves the cleaning effectiveness of alkaline baths because of its excellent detergency, solubility and stability in alkali solutions—including caustic. Our tests established these important advantages for Triton QS-15 over alkyl aryl sulfonates: At equal active concentration Triton QS-15 cleans three to four times faster; in cleaning cycles of equal duration it takes one-half to two-thirds less Triton QS-15.

Improve your heavy duty alkaline cleaner formulations with Triton QS-15. It is suggested for the cleaning of metals, bottles, food and meat processing equipment, and for any application where faster, better cleaning with alkaline solutions is important. Write for Triton QS-15 Bulletin, San-202.



Chemicals for Industry

### ROHM & HAAS

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

TRITON is a trademark, Reg. U.S. Pat. Off. and in principal foreign countries.

active)

#### 1958 Insecticide Sales (Continued)

6.	Emulsion	Concentrates	Other	than	Live-
	atock				

TOTALS 1958 TOTALS 1957	4,934,846 5,696,236	23,886,450 21,943,548	<b>9,226,29</b> 1 <b>8,360,175</b>	1,996,587 1,700,019	2,376,691 2,088,264
	XXX	XXX	XXX	XXX	131,135
<ul> <li>Fogging concentrates to be diluted with suitable oil or water</li> </ul>	XXX	XXX	XXX	xxx	108,594
	XXX	XXX	XXX	XXX	132,158
a. Fogging sprays to be used as is	XXX	XXX	XXX	XXX	123,049
8. Area Fogging Sprays	AAA	AAA	AAA	AAA	91,787
in Above	XXX	XXX	XXX	XXX	160,694
7. Stored Grain and Bin Sprays not Included					
( in a distribution of the state of the stat	84,838	217,253	103,004	27,838	448,796
To be diluted with water (non agricultural)	120,576	316.450	109.707	30.719	460.197
stock					

<sup>\*</sup>Too revealing to be released.

Harry L. Haynes of National Carbon Co. acting as moderator. First panelist was D. E. Howell, Department of Entomology, Oklahoma State University, Stillwater, who spoke on "Fly Control in Oklahoma". As in other areas, he pointed out, fly control methods in Oklahoma have undergone rapid changes in the past 25 years, mostly owing to the advent of new chemicals, Federal and state legislation,

and the development of insecticide resistance in flies.

At present, Dr. Howell said, "malathion is the most widely used residual insecticide, followed by 'Diazinon' and 'Korlan'. During the cooler months of the fly season residual organic phosphate sprays are used almost exclusively. Sugar is seldom added to the spray to enhance its action . . ."

Dr. Howell's paper appears

in full beginning on page 83.

In discussing "Fly Control for the Dairy Herd" E. H. Fisher, Extension Specialist in Entomology, University of Wisconsin, pointed out, "Excellent fly and mosquito control for the dairy herd can be achieved in Wisconsin at relatively low cost with a formulation containing 0.1 per cent pyrethrins plus one per cent piperonyl butoxide (the 'standard')".

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The most efficient way to apply this formulation is in the form of a petroleum distillate by means of a barn fogger. It may be used as an emulsion applied by hand sprayer.

"Trials in Wisconsin in 1958 showed an average 67 cents insecticide cost (\$3.00/gal.) per cow for the season where fogging was done . . .", Dr. Fisher reported. He added that "Retailers are experiencing rapidly increasing demand for the higher toxicant sprays for dairy cattle".

Some novel suggestions for the control of flies were offered by W. C. McDuffie, Agricultural Research Service, Entomology Division, U.S.D.A., Beltsville, Md., in a paper entitled, "Suggestions for the Control of Flies Affecting Man and Animals". These include the introduction of insect diseases for the control of flies as has been successfully done for certain crop pests. Encouragement of the growth of soldier fly larvae might effect house fly control, since the presence of soldier fly larvae has been observed to exclude breeding of house flies. A program for eradicating the screw-worm through the release of sterilized male flies has been successful in certain areas.

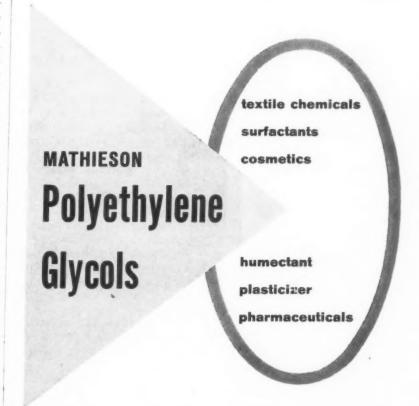
Calf pens are sadly neglected, sanitation-wise, in some of the "cow palaces with varnished interiors" and are fly breeding grounds causing heavy infestation in dairy barns, according to H. H. Schwardt, Department of Entomology, Cornell University, Ithaca, N. Y., who spoke on "The Fly Problem in New York". Experiments conducted "in the undeserved interest of those who refuse to clean their calf pens at least once a week" established that manure treatment with "Diazinon" is effective against fly larvae and against adults that wander about the surface.

The symposium on fly control was followed by a paper entitled "Insecticides and Germicides: Tools of Preventive Medicine", by Lawrence B. Hall, Communicable Disease Center, Bureau of State Services, Public Health

Service, U. S. Department of Health, Education and Welfare, Savannah, Ga. The fight against malaria and other insect borne diseases by means of DDT and other insecticides was outlined by the speaker.

#### Insecticide Survey

An 11 per cent increase in manufacturers' sales of liquid insecticides for 1958 was reported in the annual household and industrial insecticide survey. Based on reports by 128 manufacturers the survey was presented by Joseph E. Lee, McLaughlin Gormley King Co., Minneapolis, at the opening session of the insecticide division, May 19. Sales of liquids in 1958 were placed at nearly 10 million gallons. Sales of dry powder insecticides in 1958 were reported at 27.9 million pounds, which represents a decrease from last year's figure.



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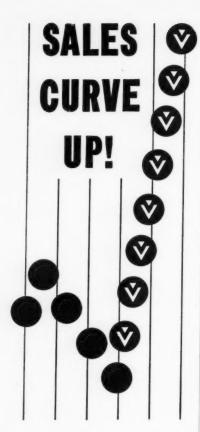
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A symposium on in-place cleaning in the dairy industry was the main feature of the Disinfectant and Sanitizers Division's afternoon meeting, May 19. Fred R. Geib of Dow Chemical Co. acted as moderator. First of the four speakers was H. G. Harding, National Dairy Research Laboratories, Oakdale, L.I. Mr. Harding spoke on: "In-Place Cleaning and Sanitizing of Equipment in the Dairy Industry."

"Invisible Sanitation" in the carbonated beverage industry revolves mostly around the barring of yeast, main spoilage organism in this group of products, according to M. H. Gaughn, Hoffman Beverage Co., Newark, N. I.

"I must admit," Mr. Gaughn said, "that we bacteriologists who work in industrial bacteriology do not appreciate as much as we should the chemicals we use". In the absence of chemicals, an industrial bacteriologist would work much like a pathologist, according to Mr. Gaughn. He would enter a food plant to do a post mortem and hand the manager a sympathy card.

Highly specialized cleaners and sanitizers are required in modern dairy establishments according to a paper contributed by R. F. Lepp, Vivian Harris, and B. F. Beaver, Ralston-Purina Co., St. Louis, Mo. Entitled "Field Observations of Dairy Pipe-Line Milkers" the report was read by Mr. Lepp. Equal in importance to the use of correct cleaners and sanitizers are good management and sanitation practices, if consistent results are to be obtained in dairy field operations.

"In place of hand brushing and soaking vats, the dairyman depends on a turbulent stream of cleaning solution to scrub and remove the soil from the line. Obviously, the requirements of chemical cleaners and sanitizers used in this manner are far different from those used in hand dishwashing operations."

Last participant in this symposium was John E. Beardsley,

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Creamery Package Manufacturing Co., Chicago, who spoke on "Cleaned In-Place Systems and Equipment for the Dairy and Food Industries." Automation of cleaning tasks has captured the interest of food and beverage processors throughout the country, Mr. Beardsley reported. "Processing plants have utilized circulation cleaning of continuous processing systems and product pipelines for some time", he pointed out. "In recent years, several custom systems have been installed in dairy, food and beverage plants to program the repetitive tasks of cleaning. These automated CIP systems have developed the need for new equipment, cleaning and sanitizing materials and modifications in the existing design of food processing equipment.

"Along with the enlargement of present cleaning systems comes more complex maintenance," the speaker explained. "Preventive maintenance must include inspection of surfaces cleaned. This was a daily part of manual cleaning, but it is often overlooked when automated practices are used."

#### **Aerosol Division**

Pressure packaged whipped cream and other food products will profit in stability, consistency, color characteristics and other properties by the advent of a new propellant trade named "Freon-C318", according to a paper by Frank W. Blodgett of E.I. du Pont de Nemours & Co. and R. C. Webster of Air Reduction Co. Entitled "'Freon-C318' Propellant for Aerosol Food Products" the paper was presented by Dr. Blodgett at the Aerosol Division's opening session Tuesday afternoon, May 19. Mixtures of nitrous oxide containing 15-30 weight per cent of the new fluorinated hydrocarbon propellant are suggested for best results and greatest economy. Toxicological and other data pertaining to octafluorocyclobutane ("Freon-C318") are currently under review by the Food

Table 1a. CSMA Survey of household and Industrial Insecticide Sales 1958-1957 (figures for 1957 appear immediately below those for 1958)

		Data in I	Pounds
		Less than five pounds	Five pounds and over
9.	Livestock Wettable Powders	217,885	162,074
		183,836	186,122
10.	Livestock Dry Powders	585,580	1,619,087
		589,049	523,295
11.	Powders, Other than Livestock	803,849	21,764,673
		751,507	26,739,720
12.	Fly Baits	1,336,821	1,315,813
		1,877,248	1,540,352
	Totals 1958	2,944,135	24,861,647
	Totals 1957	3,401,640	28,989,489
-		Data in	Units
		Pint	Over
		and less	one pint
3.	Cattle Smears and Other Screw Worm		
	Remedies	130,298	7,463
		208,483	21,381
		2 ounces	Over
		and less	two ounces
4.	Ant Pastes, Traps, Ant Baits	3,409,926	448,959
		3,085,519	451,111
5.	Personal Insect Repellents	3,210,915	147,457
		3,120,741	118,872
6.	Vaporizer Chemicals		
	For automatic vaporizer installations		
	(Lindane, etc.)	6,264	2,556
		6,334	2,809
7.	Small Pet Insecticides		
	a. Powders	97,384	548,036
		87,052	332,625
		8 ounces	Over
		and less	8 ounces
	b. Liquids, including insecticidal shampo	os 29,772	*
		40,459	*
	Totals 1958	6,884,559	1,154,471

and Drug Administration. Formal action, Dr. Blodgett indicated, is expected within the next few months.

\* Too revealing to be released.

"Evaluation of Spray Deposits and Inhalation of Particles from Pressurized Sprays", was the title of a study presented by R. A. Fulton, U.S. Department of Agriculture, Agricultural Research Service, Beltsville, Md. "With the increasing use of pressurized sprays from many types of products there is the possibility that some question might arise regarding the inhalation hazard of the particles, whether they come directly from the container or from the unimpinged particles in the air", Mr. Fulton pointed out. "Our studies of the properties of such particles covers a period of 14 years", he continued. "However the present remarks will be limited to showing that the physical properties can be utilized to produce a satisfactory spray with

a minimum of unimpinged particles."

"When a spray is being developed, the exact requirements should first be determined. It is well known in the paint spraying trade that the consistency of the product, the pressure, and the distance at which the dispenser is held from the surface are important in obtaining uniform coatings. This is true also for numerous other types of applications where atomizing or pressure sprays are used. The quality of the coating applied depends on the skill of the operator. In quantity production items, uniformity of application is obtained by releasing the material at fixed distances.

"When a pressurized spray product is developed for home use the distance that the dispenser will normally be held from the surface should first be determined. In most cases this distance will vary from six to more than 24 inches, depending on the product being dispensed. When this distance has been established, the formulation, the valve and the orifices must be selected to give the desired output and particle size for the established distance. With our present knowledge of particles it can be stated that a product can give good spraying characteristics at only one distance and cannot be designated to give good performance over a wide range of distances."

Mr. Fulton went on to suggest the following tests for evaluation of a spray: 1. Output rate of the dispenser; 2. Particle size (a) from the dispenser to the target and (b) the unimpinged spray; 3. Residue impinged on a vertical surface and residue settled out on a horizontal surface below the vertical one; and 4. Particles found in the air after spraying the surface.

"1. The output of the dispenser is determined by discharging the unit for 10 seconds, weighing before and after. The output depends on the pressure of the formulation, the sizes and arrangement of the orifices, and the physical properties of the formulation.

"The particle size is the most complex of the tests especially if the formulation is composed of many ingredients of different volatility. In some cases the volatility changes so rapidly that it is almost impossible to determine the particle size except by indirect methods. One direct method was described by Yeomans in 1953. It is sometimes necessary to cover the slides to prevent evaporation of solvent from the particles collected. At short distances with most spray formulations containing alcohol the volatile particles are collected in heavy clear mineral oil. Particles taken several feet from the dispenser are collected on siliconecoated slides.

"The amount of residue impinged on a vertical surface and settling out on a horizontal one is determined by spraying at a fixed distance on surfaces that can be weighed. The surface of the vertical plate must be similar in texture to the surface to be treated, since the texture of the surface influences the amount of spray that adheres. This surface must be large enough to cover the entire spray pattern and must not change weight with changes in humidity. The surface must be protected from cross air currents. This test is similar to the method proposed by CSMA Particle Size Committee. The vertical and horizontal surfaces are weighed independently.

"The sampling of the fine particles can be done by two methods: (1) collecting and weighing particles on a fine filter of known pore size; (2) by precipitating the particles with an electrical precipitator in a weighed tube. We use a commercial device, the Electrostatic Sampler Model F, manufactured by the Mine Safety Appliance Co. The sampler unit is provided with a small blower that draws 3 cubic feet (84.9 liters) of air per minute through the weighed tube. The breathing rate of an average man varies from seven liters (sitting) to 14 liters (walking 2 miles an hour) per minute. From the weight of material in the

sampler it is possible to calculate the amount that might be inhaled by an operator applying the spray.

"For evaluating and developing sprays we have found a large paper drum two feet in diameter and three feet long to be satisfactory. Vertical and horizontal test surfaces are set up within the drum, which is placed in a horizontal or vertical position depending on the desired distance from the sprayer to the target. Holes are cut in the drum for the sampler and air intake. The spray is applied to the target by reaching into the drum and releasing the valve of the dispenser, after which the cover is placed on the drum and the air sampler is started When the sampling is finished, the plates and sampling tube are weighed. After several tests have been made at various distances, the optimum spraying distance can be determined as that which yields maximum uniform deposit on the target with minimum particles in the air. If unsatisfactory results are obtained, it will be necessary to change the ratio of ingredients, the propellants and/or the orifices to obtain a satisfactory spray."

Mr. Fulton then reported results of a series of tests in which the formulation and nozzles were varied over a wide range: With a typical aerosol formula and using a large outlet orifice producing a discharge rate of 2.4 grams per second and particle size of 28 microns MMD, 81 per cent of the aerosol solution was deposited on the plate at six inches, while only 40 percent was recovered at 12 inches. Formula E with a slow discharge rate of 0.65 grams per second and an MMD of 61 microns deposited 71 per cent at 12 inches and only 36 percent at 24 inches. The most efficient spraying distance would be less than 12 inches. Formula F with a high discharge rate and an MMD of 400 microns gave 76 percent of the spray at 24 inches."

In summary Mr. Fulton said: "It is apparent from the data presented that pressurized formulas designed for depositing a coating on the surface of an object should be carefully formulated to obtain the desired texture. The discharge rate and the distance the dispenser is held from the object must be kept constant to obtain the desired results and eliminate 'bounce-off' from the object being coated. With this type of spray 83-85 per cent impingement appears to be the maximum that can be expected and 70-75 per cent could be considered satisfactory.

L. Cohen, R. J. Meyer and J. S. Wolff of B. F. Goodrich Chemical Co. described a method and instruments for the "Rheological Characterization of Formulations for Pressure Packaging." In the aerosol field of packaging a physical change in the dispensed material is normally desired, according to the authors. By contrast, the objective in inert gas propellant packaging is usually to dispense the product in a physical

form familiar to the consumer. Chemical formulation of the product will vary from other packaging methods only to obtain the necessary rheological behavior since the gas is inert to the product, it was pointed out. The study of rheological behavior thus becomes very important in the design of new formulations to be marketed in pressure packages.

Last paper presented in this aerosol session was "Blending of Different Propellants—Covering the Methods, Costs and Analysis of Such Blends", by E. E. Husted, Union Carbide Chemicals Co.

#### Aerosol Survey

An all-time high of 470 million aerosol units was filled in the United States and Canada in 1958. This compares with 400,000,000 units produced in 1957. These figures do not include food aerosols. Both are projected figures

which were presented by Frederick G. Lodes, chairman of the aerosol survey committee, at the Aerosol Division's meeting, May 19. Actually reported number of units produced by 95 companies in 1958 was 341,383,496, compared with 339,490,802 in 1957, when 92 firms participated in the survey.

The projected totals are in part based on the production figures supplied by six major aerosol container manufacturers and by 10 companies making aerosol valves. Total number of aerosol cans produced and sold in 1958 by these participants amounted to 472,807,614 in 1958 against 361,743,798 in 1957. Sales of aerosol valves rose from 422,812,332 in 1957 to 547,803,389 valves in 1958.

Dental cream is shown for the first time as a separate item in the survey with a reported production of 12,905,832 units. Veterinarian and pet products, the other new category listed, showed sales of 3,002,169 units.

Undisputed leader among pressure packaged products continue to be hair sprays with sales reported at 92,593,592 units or approximately 27 per cent of the entire non-food aerosol market. Hair spray units sold in 1957 amounted to 94,431,957. Second largest item, room deodorants show an increase in sales to 49,780,185 units compared with 41,988,888 reported in 1957. The other three leading categories in the 1958 aerosol market were: shaving lather, 45,313,616 units; insect sprays, 42,299,850 units; and coatings, 30,123,351

It is interesting to note that the smaller size pressurized container, six ounces and less, shows a substantial sales gain: from 150,340,628 in 1957 to 159,000,514 in 1958. This is in sharp contrast to trends prevailing in other branches of the specialties industries, where the large size container is taking a growing slice of the market. Sales of aerosols packaged in glass containers have dropped from 21,279,442 units in 1957 to 11,262,234 units in 1958.

CSMA Survey of Industrial Detergents Sales — 1957
(collated from reports by 36 companies)

Product	Sales of Fnished Pounds	Products Gallons
l. Industrial Floor and Wall Cleaners	19,060,511	5,004,174
<ol><li>Metal Processing (exclusive of electro-plating</li></ol>	2.000	
brighteners and solvent cleaners)	28,102,699	+
3. Transportation and Vehicle Cleaners		
(excludes steam cleaners)	Ť	60,953
4. Steam Cleaners		
a. automobile maintenance	404,500	+
b. building maintenance	†	* * *
<ol><li>Hand Cleaners (includes waterless)</li></ol>		934,272
a. solid	7,864,093	
b. paste	2,699,065	
6. Rug and Upholstery Cleaners		
(excludes solvent cleaners)	+	†
7. Toilet Bowl Cleaners	†	1,354,521
8. Bottle Washing Compounds	†	***
9. Dairy Cleaners and Maintenance Items		393,300
a. solid	9,955,845	
b. paste	***	
(excludes bottle washing compounds)		
O. Dairy Sanitizers and Detergent Sanitizers	4,217,978	367,200
1. Food Sanitizers (excl. dairy sanitizers)	†	†
2. Other Disinfectants & Germicides		
(includes janitor supplies)	†	1,772,626
3. Machine Dishwashing Compounds	†	+
4. Hand Dishwashing Compounds		
(excl. household products)	*	190,540
5. Laundry Detergents		
excludes straight solvent cleaners)	89,996,146	Ť
Total	162,300,837	10,077,586

<sup>†</sup>Too revealing to be released.

The aerosol survey committee gave serious consideration to the inclusion of pressurized food packages, Mr. Lodes reported. However, it was decided to defer the listing of food categories to next year's compilation.

#### Disinfectant, Sanitizers

A symposium on staphylococcus disease problems was held by the Disinfectant and Sanitizers Division the afternoon of May 20. L. S. Stuart, head of the bacteriological section of the Pesticides Regulations Branch, USDA, was moderator. There were three participants.

William McCabe, Department of Preventive Medicine, University of Illinois Medical School, Chicago, spoke on the "Clinical Aspects of the Staphylococci and Staphylococcal Disease." He was followed by Dr. Robert J. Anderson, Assistant Surgeon General, chief of the Communicable Disease Center, U.S. Department of Health, Education and Welfare, Atlanta, Ga. Dr. Anderson spoke on "Environment and the Staphylococcus."

"Some Environmental Aspects of Hospital Sepsis" were presented by Dr. E. G. Klarmann of Lehn and Fink Products Corp. Staphylococcal sepsis calls for the concurrent application of preventive measures in all areas of hospital services including medical, surgical, nursing, pediatric, house-keeping and laundry, and at all echelons of these services.

#### Joint Session

The joint session on the afternoon of May 20, of the Soap, Detergents and Sanitary Chemical Products Division and the Waxes and Floor Finishes Division consisted of a floor maintenance workshop. Earl Brenn of Huntington Laboratories, Inc., presided. Panel moderator was W. J. Wilhoyte of E. I. du Pont de Nemours & Co. with L. D. Berger, Jr. of Union Carbide Chemicals Corp. as consultant. The workshop's theme was "The Manufacture and Mainte-

nance of Resilient Flooring." Five representatives of different branches of the resilient flooring industry participated.

The Aerosol Division, the afternoon of May 20, held an open forum on "Ways in Which the Aerosol Division Can Render Maximum Service for Its Members." Views on a wide range of subjects from convention "open house" night to the aerosol survey were voiced. CSMA plans to hold these forums every couple of years.\*

#### **Metal Containers**

(From Page 57)

steel and solder electrodes immersed in the product, provides an index of the corroding effect of the product on the metals present in the can. The index of product corrosiveness of various soft drinks was compared with a considerable amount of shelf life data. A direct correlation between current measurement and shelf life was demonstrated. As a result, the shelf life of soft drinks is now being predicted without storage tests.

Some measure of success has been achieved in predicting product-container performance of other systems. When dealing with new product types, it is necessary to establish the basic relationship between current flow and shelf life for that product category. This involves test packing and correlation with corrosivity data to determine the electrochemical pattern. This information can then be used for calculating shelf life for similar type products.

A corrosivity test of a new product, where no previous pack information is available, aids in selecting can variables for shelf life testing, thus reducing the numbers of variables. The Corrosivity Tester enables one to determine the corrosive components of a product and other contributing factors. It has been of much value in reformulating products to eliminate or minimize these corrosive components.

Pails and drums including the five gallon size are manufactured on almost totally automatic lines. Welding of sideseams and ears, compound lining, double seaming, air testing, spraying, and baking are accomplished on modern equipment with a minimum amount of labor. Through these highly automatic operations rigid quality specifications can be met. Formerly, all pails were enamel lined to prevent rusting prior to packing. However, the introduction of rust inhibitors for steel pails has now eliminated the need for interior coatings for products that are not metal sensitive.

Something new in 55-gallon drums is the Uni-Drum developed by Vulcan Containers, Inc., and Signode Steel Strapping Co. Instead of being perfectly concentric, the rolling hoops are slightly offset through a portion of the drum circumference. By proper positioning of adjacent drums in storage. the contact areas of each are increased. When the drums are banded together, scuffing, denting, and deformation are minimized because rotation and vertical and horizontal movements are cut. In addition, shipping space is reduced. Banded units of four drums can be handled by lift trucks without the use of pallets.

#### Summary

This is the story of the metal container. No longer is metal used merely for product transport, for protection from spoilage or physical damage. A multitude of unique features are available in metal cans to meet specific requirements. Constant improvement of materials and manufacturing methods insure high quality and reasonable cost. The wide range of materials, structural designs and attractive lithography have made product identification a legend in modern merchandising. The metal can of today acts as a salesman in virtually every product line. That the packaging engineer has made a worthwhile contribution to this progress is selfevident.

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combination with linalool it produces new shadings. Also available is Ethyl Linalyl Acetate
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#### Surfactant Outlook

(From Page 50)

in Table 7. These classifications represent innumerable different formulations but the alkyl aryl sulfonates, alcohol sulfates and the ethylene oxide adducts dominate most of them.

Taking all of the previously mentioned factors into account, an attempt has been made to estimate the current and future volumes of these packaged household detergents by product types. These estimates are tabulated in Table 8 for the years 1958 and 1963.

Solid, heavy duty, high sudsing products will hold the major share of the market. It appears that solid, heavy duty, low sudsing formulations may lose some position in view of the trends in equipment and expected formulation changes which will probably be necessitated. Liquid heavy duty products are expected to continue to grow if the "push button" innovation in washers develops. Solid light duty detergents have dropped in the five year period losing ground to liquid light duty formulations. As a consequence, the liquid light duty product type may more than double by 1963. In view of the considerable efforts being expended on the development of synthetic toilet bars by the industry, and since this classification represents the last stronghold of soaps, synthetic bars will probably show the greatest percentage increase of any consumer product.

These estimates, coming from a raw material supplier to the industry, are made from the outside looking in. Others within the consumer product end of the business may be better qualified to make estimates of the packaged household synthetics by product types. Also, confidential research developments may be underway by the industry that could radically affect these estimates.

It is not difficult to predict the future sales of detergents on an "as sold" basis with reasonable ac-

Table 7. Consumer Syndet Classifications

	SOLID	Primary
Classification	Primary Use Definition	Surfactant Types In Formulation
Heavy duty (high sudsing)	Home laundry	Alkyl aryl sulfonates and alcohol sulfates Alkyl aryl sulfonates.
Heavy duty (low sudsing)	Home laundry	Alkyl aryl sulfonates, Alcohol sulfates, Amides, ethylene oxide adducts
Toilet bars	Bath	Alkyl aryl sulfonates, Alcohol sulfates, tallow or coconut oil soaps
Light duty (high and low sudsing)	Dishes, synthetic fibers and woolens	Alkyl aryl sulfonates, Alcohol sulfates
Light duty (high sudsing, low sudsing) (Liquid hand and mechanical)	Dishes, synthetic fibers and woolens	Alkyl aryl sulfonates Ethylene oxide adducts, Amides, sulfated Alcohols and sulfated ethylene oxide adducts
Heavy duty (High sudsing)	Home laundry	Alkyl aryl sulfonates, amides and ethylene oxide adducts

curacy because the per capita consumption of soaps and detergents has not changed appreciably for the past 20 years. The washing efficiency of the products has been substantially improved during that period, and therefore, even with no great change in per capita consumption the general level of cleanliness and sanitation has been increased.

A forecast of detergent sales from the present time through 1965 may be based upon the following assumptions:

- Per capita consumption will remain relatively constant.
- Synthetic detergents will ultimately increase their percentage of all household products.

- Synthetic detergents will continue to grow in use in the toilet bar field.
- Industrial applications are expected to continue to expand without radical changes in growth.

Based on the detailed effect of these factors it is estimated that synthetics on an "as sold basis" by 1965 will have captured approximately 80 per cent of the total market as shown in Table 9. Since synthetics on the "as sold basis" now represent 73.5 percent of the total market, it is expected that the increase will occur gradually.

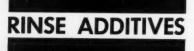
If these estimates can be considered to be reasonably accurate the consumption of active organic synthetic detergents will amount to 1,128,000,000 pounds by 1965.

Table 8. Estimated Packaged Household Synthetic Detergent Sales by Product Types

(Millions of Pounds - As Sold 1958 and 1963

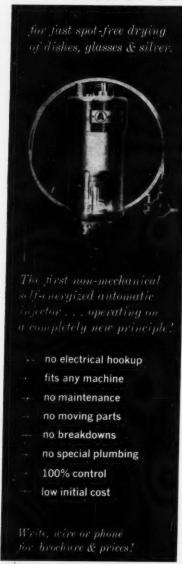
Туре	1958	%	1963	%
Solid heavy duty, high sudsing	1,568	62.8	1.709	56.0
Solid heavy duty, low sudsing	303	12.1	213	7.0
Liquid heavy duty, high and low sudsing	103	4.1	244	8.0
Solid light duty, high and low sudsing	176	7.0	61	2.0
Liquid light duty, high and low sudsing	263	10.5	610	20.0
Synthetic toilet bars	87	3.5	213	7.0
Total	2.500	100%	3,500	100%

Data: Industry estimates.



can be the most profitable item in your line with the

#### **R-3 INJECTOR**



#### ALMO LABORATORIES

424 Madison Avenue, New York 17, N. Y. PLaza 8-2740

#### Fly Control

(From Page 87)

or to prevent the spread of disease (anaplasmosis). Even though ranchers are convinced that horse flies cause tremendous losses they are seldom willing to round up range animals and treat them at least twice each week as is necessary for adequae control when pyrethrins are used.

Automatic or treadle operated sprayers for horse fly control have been tried extensively in Oklahoma but have been almost completely discarded as mentioned in the section on horn flies. Rubbing devices charged with repellents or repellents and pyrethrins have been effective if carefully placed, but horse flies are usually associated with wooded areas where many other places to rub are available. Adequate usage of the device requires careful placement in relation to salt, supplemental feed and water.

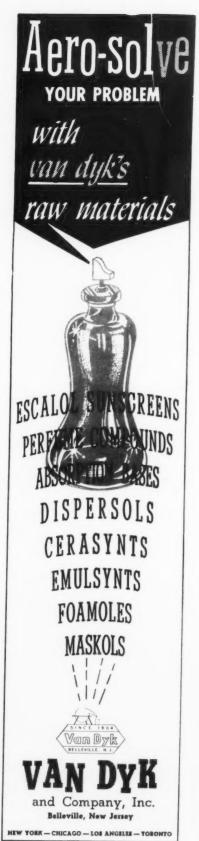
#### Summary

Fly control in Oklahoma has changed rapidly during the last quarter of a century. The main factors causing the changes are the development of new chemicals, federal and state legislation and the development of strains of flies resistant to insecticides.

House flies currently are controlled with organic phosphate baits or residual sprays, space sprays of synergized pyrethrins, "Lethane," or "Thanite." Repellents are being used in limited areas.

Control of stable flies and horse flies is based almost exclusively on the use of synergized pyrethrins and repellents.

Most range animals are treated with chlorinated hydrocarbons or given access to rubbing devices charged with the same insecticides for the control of horn flies. Dairy cattle are usually dusted with methoxychlor or sprayed with space sprays. These often contain repellents.\*



#### **Powdering of Polish**

(From Page 83)

flex P-600" to 1.5 parts at the 30 per cent polyethylene level was only slightly beneficial. However, replacing 10 parts of polyethylene with carnauba corrected the powdering. Figure 4 shows the actual panels used in obtaining the results in Table VI.

A direct comparison of the powdering tendencies of several waxes in a buffable formula is given in Table VII where it is shown that carnauba is best with "Petronauba 'D' "\*†\*† and "Duroxon J-324"\*\*† also perform very well. For these tests a non-filming polyacrylate was used.

The same type of powdering was also encountered in a formulation using a film-forming polyacrylate with a high polyethylene content.

#### Summary

In this paper the problem of surface abrasion of floor polish films has been discussed frankly and in some detail with particular emphasis on formulations based on the newer raw materials. Test results, which we feel to be reliable,

Table VII. Comparison of Powdering Tendencies of Several Waxes

Buffable type basic formula		Powdering tests			
	Parts		50°F	77°F	
Polymer (Polyacrylate @ 14%)	60				
"Shanco L-1001"*† @ 14%	10	Carnauba	None	None	
Wax @ 14%	30	"Petronauba 'D' "*†*†	VG-G	VG	
"KP-140"*	0.5	"Duroxon J-324"**+	VG-G	VG	
"Carbitol"†	0.5	Polyethylene	P-VP	P	

<sup>††</sup>Carbitol is available from Union Carbide Corp., New York,

favor the hypothesis that no single material or class of materials bears overall responsibility for powdering. Rather, the problem is one of balancing the materials available in such a fashion that the problem will not occur under any environmental conditions likely to be encountered in the field.

The following points are worthy of repetition:

- A. Resins and polymers do not per se cause powdering. The ratio of these components in a formulation is important, however.
- B. Choice of type and amount of plasticizers is highly important in preventing powdering in dry bright formulations.
- C. Water emulsion and buffable formulas containing more than 20 per cent polyethylene show definite powdering tendencies.
- D. Powdering may occur on

one substrate (asphalt) and not on others even if identical formulations are applied.

E. Temperature, drying time and humidity conditions influence powdering. Formulations should be checked for powdering under those atmospheric conditions which will obtain in the field.

#### Johnson in Venezuela

S. C. Johnson & Son, Inc., Racine, Wis., opened its first plant in Venezuela recently at Maracay, about 70 miles from the capitol city of Caracas. Paste and liquid waxes, insecticides, and other Johnson products are being manufactured at the plant which has 10,000 square feet of floor space.

-+-

S. C. Johnson and Son de Venezuela, S. A., a subsidiary of the Racine firm, operates the new facility. Johnson has two other South American subsidiaries, one in Argentina, and the other in Brazil.

Figure 4. Sample corresponds with formulas in Table VI.



<sup>\*†\*†</sup>Petronauba D is available from Bareco Wax Co., Division of Petrolite Corp., Tulsa, Okla.

<sup>\*\*†</sup>Duroxon J-324 is available from Dura Commodities Corp., New York.

#### **HUNDREDS OF**

### CHEMICAL-SPECIALTY MANUFACTURERS

#### DEPEND ON COLGATE FOR

#### TECHNICAL SERVICE AND QUALITY INGREDIENTS

Now—as always—you can count on Colgate as a source of quality soaps and synthetic detergents for use in chemical-specialty manufacture. What's more, our Technical Service Staff has been enlarged and will be happy to help you solve your soap and synthetic detergent application problems.





For information about quality soaps, soap products, and to get your free copy of our New Soap Buying Guide, write: Associated Products Department,

#### **COLGATE-PALMOLIVE COMPANY**

300 Park Avenue, New York 22, N. Y.

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### NEW! COLGATE

An alkyl aryl sulphonate-type liquid detergent providing excellent detergent, wetting, penetrating, foaming and dispersing properties in hot

properties in hot or cold, hard, soft, alkaline or acid waters.

Available in 55-gal. drums.



### NEW! COLGATE

An alkyl aryl sulphonate synthetic detergent in spray form. For use in industrial cleaning,

processing, compounding. Can be colored and perfumed as desired.

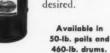


Available in fibre cases. Low Density 30 lbs. net Heavy Gravity 60 lbs. net

### New! COLGATE ARCTIC SYNTEX 036

A 100% liquid non-ionic surface active agent. For use in chemical-specialty manufacture where an economical and effi-

cient wetting, penetrating, emulsifying and cleaning agent is desired.



OTHER PRODUCTS of interest to chemical-specialty manufacturers include: Water Queen Granulated Soap, Arctic Crystal Soap Flakes, Arctic Crystal Granulated, Arctic Syntex "M," Arctic Syntex "HD," Colgate Concentrated Liquid Soaps.

Remember! We offer a most complete line of soaps and synthetic detergents. Consider the convenience of dealing with us for all your needs—including technical service.





# Packaging...

#### AEROSOLS · LIQUIDS · PASTES · POWDERS

Redesigned bottle in eight, 12 and 16 ounce sizes has been adopted by Stanley Home Products, Inc., Westfield, Mass., for its line of toiletries. Thatcher Glass Manufacturing Co., New York, designed bottles which feature permanent brand identity in form "S's" blown in glass around the shoulder. In addition to bubble bath, Stanley will pack two of its shampoos, cream rinse, baby lotion and oil, and beauty lotion in new bottle.

Automotive Chemicals Cleaners Detergents Deodorants Disinfectants Floor Products Insecticides Laundry Bleach Metal Cleaners Moth Products Polishes Shampoos Shave Products Soaps Liquid Starch Toiletries and other Chemical Specialties

A market for over 28 billion packages annually









Over 3000 stock bottles-standard closures by the score-applied Color Lettering



## The magic of Owens-Illinois designers turns any stock bottle into a special container for you!

Through the magic of O-I designers, any of the thousands of stock bottles on their shelves can be turned into a special container designed exclusively for your product.

The glass container best suited for your needs becomes an econom-

ical, sales-attracting package . . . gives your product the selling advantages on store shelves.

Take advantage of the Owens-Illinois Complete Packaging Approach...the right containers, most attractive label designs, best fitments or closures, and sturdy merchandising cartons . . . plain or imprinted with your sales message.

Get the full information from your nearby Owens-Illinois representative, on how O-I containers can help in your selling program.

DURAGLAS CONTAINERS
AN (1) PRODUCT

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GENERAL OFFICES . TOLEDO 1, OHIO

### ackaging NOTES

#### **Dundas Heads GCMI**

Fred N. Dundas, executive vice-president of Dominion Glass



Fred N. Dundas

Co., Ltd., Montreal, was elected president of the Glass Container Manufacturers Institute Inc., New York, at a meeting of the institute's board of trustees held in White Sulphur Springs, W. Va., last month.

Other officers elected were I. S. Heuisler, Maryland Glass Corp., Baltimore Md., first vicepresident, and C. G. Bensinger, Owens-Illinois Glass Co., Toledo, O., second vice-president.

Four vacancies on GCMI's board of trustees were filled by J. Gordon King, Hazel-Atlas Glass division, Continental Can Co., New York, who was re-elected, and G. F. Collins, Jr., Liberty Glass Co., Sapulpa, Okla., James G. Ferguson, Laurens Glass Works, Inc., Laurens. S. C., and E. M. Terner, Metro Glass Co., Jersey City, N. J., who were elected for a first term. More than 300 industry executives and their wives attended the three day meeting.

#### **Aluminum Can Brochure**

American Aluminum Co., Mountainside, N. J., recently published an eight-page catalog of its line of standard drawn round aluminum cans. Included in the

brochure are lists of 335 stock sizes ranging in diameter from 11/16 of an inch to 25 inches. Heights are made to customers' requirements. Also given is general information about material use, type of finish, packaging, and method of ordering. Copies of "Catalog B" may be obtained from the company.

#### Marks "Armstrong Day"

An "Armstrong Day" celebration was held recently in Dunkirk, Ind., to mark the ground breaking for the expansion of the glass container plant there of Armstrong Cork Co., Lancaster, Pa. Hundreds of the town's 3,500 residents turned out for the celebration which included a parade and official welcoming ceremonies for Armstrong officials. Among those representing the company were C. J. Backstrand, president; R. H. Hetzel, assistant general manager and general sales manager of the glass and closure division; and W. W. Pedrick, division production manager. Dunkirk's Mayor Richard Overmyer and William Shepler, executive director of commerce and industry for Indiana, welcomed the company officials.

The expansion project is scheduled for completion early next year and is expected to boost production capacity by 50 per cent. The Dunkirk plant manufactures glass containers for the chemical, drug, toiletry and cosmetic, and food and beverage industries.

#### **Faustin Solon Retires**

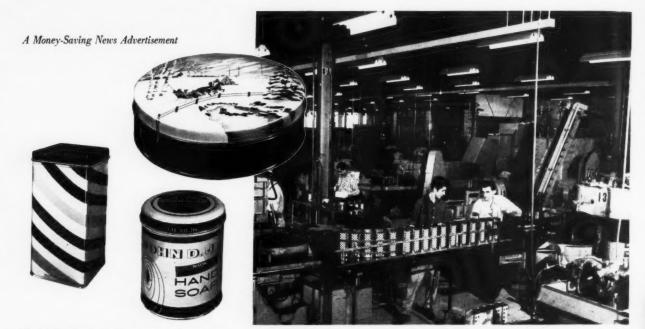
Faustin J. Solon, a vicepresident of Owens-Illinois Glass Co., Toledo, O., retired recently after nearly a half century of service with the company. Joining the old Owens Bottle Co. in Toledo in 1910, he served in production until after World War I, when he entered the sales department. In 1929, Owens Bottle merged with the Illinois Glass Co. and Mr. Solon became manager of pharmaceutical, proprietary, and prescription sales. Two years later he was named general sales manager of the glass container division and held that position until 1941. He had been a vice-president since 1934.

C. J. Backstrand, president, Armstrong Cork Co., Lancaster, Pa., turns the first space full of earth for start of construction of new facilities at the company's Dunkirk

full of earth for start of construction of new facilities at the company's Duhana, Ind., glass container plant.

Left to right are: William Shepler, executive director of commerce and industry for Indiana; C. S. Conrad, Ir., Armstrong's chief architect; G. A. Reinhard, Ir., director, central engineering department; W. W. Pedrick, production manager, glass and closure division; V. L. Ritter, Dunkirk plant manager; R. H. Hetzel, division assistant general manager and general sales manager; Dunkirk Mayor Richard Overmyer; Mr. Backstrand; and R. M. Ulmer, assistant general sales manager.





Virtually every round, square, oval or oblong shape of "specialty" metal container, handsomely decorated by modern color lithography, is produced by Olive Can Company. The three shown above are typical examples.

A partial view of one of Olive Can Company's high-speed automated production lines. An important feature of each line is the short set-up time required to "switch" runs from one type container to another.

#### Low Cost "specialty" metal containers

How Olive Can Company's new, highly automatic production facilities . . . and 46 year file of stock design tins afford tremendous metal container economies

ncreased emphasis is being placed by Olive Can Company executives on their firm's ability to offer customers a wide variety of stock container design tins to help cut costs in introducing new products and repackaging "standards".

Olive Can Company, whose continuous growth has paced the expansion of the "specialty" container market, recently enlarged its operations by moving into an ultra-modern plant on Chicago's northwest side. These new facilities, which include a number of highly automated production lines, have enabled the firm to produce an increasingly wider variety of metal containers, both in size of container involved and quantity desired. This flexibility of production enables customers to keep their own metal container inventory at economically low levels, with every assurance that Olive can immediately schedule and produce additional metal containers within two or three days if they are urgently needed. Also, if a company is uncertain about the quantity of metal containers required to market a new product, it can place a small initial order, again with the assurance that Olive's unique production facilities can handle a sudden spurt without paying any type of "penalty".

Coupled with this unique ability to service any size order, the company's offer of a wide assortment

of square, round, oval and oblong shape stock design tins has met with considerable success among both large and small buyers of "specialty" metal containers. Because these designs have proven successful and are economical to use, customers have happily forced Olive to devote an increasingly larger proportion of their production output to this type of business. Equally important, these stock designs not only give customers more "metal container packaging" for their money, but they can be produced in a minimum of time (when necessary, in less than forty eight hours).

In the field of custom design tins, a number of top national design and lithography awards have repeatedly been won by Olive Can Company's engineering, art and lithography experts. This creative service is available to all Olive customers and often results in a container that wins solid acceptance from the trade and immediate acceptance from the ultimate consumer.

For further information about plain and lithographed, custom or stock designed "specialty" metal containers contact—

OLIVE CAN COMPANY 4702 North Oketo Avenue • Chicago 31, Illinois What's New?





A waxless floor finish called "Britecote" A waxless floor finish called britecote for use on all composition floors is made and filled by The Selig Co., Atlanta, Ga., in cans from American Can Co., New York, Caps are also from American. Product is said to impart clear, resilient, and slip-proof surfaces without scuffing, streaking, or smearing.

A new metallic coating for its line of "Spra-tainers" has been announced by the can division of Crown Cork & Seal Co., Philadelphia. Metallic coating is applied to cans after an initial pre-coating and then they are sprayed with a clear or colored lacquer. Finished containers are said to have a lasting lustre and are available in gold, silver, or a variety of pastel colors.

"Anco" car wash from the chemical products division of "Anco" car wash from the chemical products division of The Anderson Co., Gary, Ind., is packaged in bottles by Owens-Illinois Glass Co., Toledo, O. O-I also supplies the container cap. The product is said to be especially formulated for new acrylic and melamine auto finishes but may be used for all cars.

"Anco" is being marketed through oil companies, independent automotive wholesalers, and "Anco" retail outlets. Twelve-ounce bottle for 12 washes, retails for \$1.





"Penetrol," rust preventive, one of a line of chemicals and stencil inks manufactured by Reynolds Ink, Inc., Cleveland, which are pressure packaged in cans supplied by Continental Can, American Can, and Jrown Cork & Seal Co. Cap is from West Penn Mfg. & Supply Corp., Brackenridge, Pa., and valve is by Sprayon Products, Inc., Cleveland, the filler.

A hand applicator for use with "Dri-Die Insecticide 67," the new treated silica gel powder, has been designed by W. R. Grace & Co. Davison Chemical Division, Baltimore, and is available through pest control chemical distributors which handle the insecticide. The device consists of a polyethylene container to which two attachments can be fitted. One is a long nozle to blow the powder into spaces where general distribution is desirable and not objectionable. The other is a spreading device which will roll the insects but which will avoid general dusting through the atmosphere.



New glass containers for "Sea Breeze" antiseptic by Sea Breeze Laborateries, Pittsburgh, Pa., are made by Brockway Glass Co., Brockway, Pa., in four and a quarter, 10, and 16 ounce sizes. Caps are supplied by Armstrong Cork Co., Lancaster, Pa., and cartons are from Richardson, Taylor-Globe Corp., Cincinnati. Labels are by National Label Co., Philadelphia, with the entire package design by Robert Zeidman Associates. New York.



Donald Deskey Associates, New York, have designed this new packaging motif for introduction of new line of men's toiletries by Yardley of London, New York. Aerosol shave lather, shave bowl, shave cream in tube and after shave lotion are featured in attractive counter display which stresses visibility.



"White Rain" lotion shampoo and "White Rain" clear shampoo made by Toni division of The Gillette Co., Chicago, is being packaged in glass containers by Brockway Glass Co., Brock-

way, Pa., in seven, three and a half, and two ounce sizes. Tri-fluted cap is a private mold design of Toni's, Bernardin Bottle Cap Co., Evansville, Ind., and Braun Hobar, Milwaukee.

New foil label which features yellow lettering on a green field marks the introduction of a newly formulated "Pine-Sol" disinfectant from Dumas Milner Corp., Jackson, Miss. Product, on market for past ten years, has been changed primarily with the addition of chloro-o-phonolyhonol.

RedRam Chemical Co., Brooklyn, N. Y., is now offering its packaging service in three pound aerosol containers to manufacturers of insecticides and deodorants. Container is supplied by Tube Manifold Corp., North Tonawanda, N. Y., with valve from Precision Valve Corp., Yonkers, N. Y., and cap by Sterling Seal Co., Erie, Pa. Containers, which meet ICC requirements, are packed six to a carton.







# ...let Maryland Glass design a bottle or jar for your exclusive use



When you drop a packaging problem in our lap, the end result is more than a glass container. It is an idea... born of restless imagination, shaped by skilled hands, backed by years of sound experience. Our creative staff gives you a selling package that packs well, helps stop the eye and start the sale at the point of purchase. For a successful solution to your design problem, contact MARYLAND GLASS CORP., 2153 Wicomico St., Baltimore 30, Md.

PACK TO ATTRACT IN

### MARYLAND GLASS

**BLUE • AMBER • FLINT** 

#### Paper Box Contest Winners

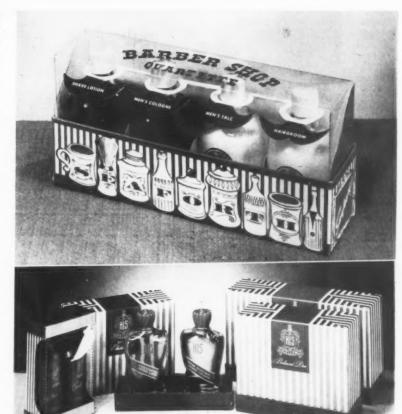
Paper box packages for products from the Seaforth division of Prince Matchabelli, Inc., New York, and House for Men, Inc., Chicago, were among the award winners in the ninth annual set-up paper box promotional competition sponsored by the National Paper Box Manufacturers Association in Philadelphia last month. Seaforth's "Barber Shop Quartette" box by Newark Paper Box Co., Newark, N. J., won a first award in class A, which was for general superiority according to end use. Boxes for "His" men's toiletries from House for Men, Inc., were by Congress Paper Box Co., Chicago, and won a second award in the class A category.

More than 2,400 entries were displayed at the association's annual meeting and "Boxarama" exhibit and winners were selected by a seven man panel of packaging, merchandising, and design experts. Merchandising appeal was the primary consideration for an award in each of 26 different product categories, according to the association, Thirty-one first awards were voted, 28 second, and 35 honorable mention.

Among those on the judging panel were: Philip Lisbon, director of package development, Max Factor and Co., Hollywood, Calif.; Frank A. Muller, merchandising manager, Bristol-Myers Co.'s products division, New York City; Maxwell B. Rogers, director of design, Avon Products, Inc., New York; and Lawrence H. Zahn, director of methods and package development division, Ciba Pharmaceutical Products, Inc., Summit, N. J.

#### **Thatcher Sales Increase**

Net sales of Thatcher Glass Manufacturing Co., New York, for the quarter ended Mar. 31, 1959, increased to \$9,631,713 compared with \$9,105,815 for the same period last year. Net income decreased from \$501,989 last year to \$430,586 and earnings per common share dropped from 50 cents a share to



Award winners in the soap and men's toiletries category of the 1959 Set-Up Paper Box Competition, sponsored by the National Paper Box Manufacturers Assn., Philadelphia, were announced during NPBMA convention in Philadelphia last month. First award in soap and men's toiletries boxes (top) was won by "Barber Shop Quartette" box of Seaforth Division, Prince Matchabelli, Inc., New York. Newark (N. J.) Paper Box Co. supplied the box. Second award in the soap and men's toiletries boxes category was won by "His" line of men's toiletries, produced by House for Men, Inc., Chicago, Congress Paper Box Co., Chicago, supplied the boxes which established family identity for men's toiletries sets.

43 cents a share. Common shares outstanding last year were 762,817 compared with 1,003,955 at the end of the first three months of 1959.

#### Package Research Service

A new package research service was announced last month by Harold V. Bell & Associates, New York, which involves the testing of label visibility and legibility through psychological interviewing techniques. Under the service two groups of customers for a particular product will be studied. One group will be tested in the laboratory with tachistoscopic measurement of the speed with which the product label conveys the type of

product and brand name. Further tests will be made under supermarket conditions. The other group will be interviewed in the field in various cities. Clients will receive an analysis by Bell psychologists of material gathered and a written report. Total cost of the service, according to Bell, should be about \$2,750.

#### Joint Container Research

Inland Steel Container Co., the drum and pail division of Inland Steel Co., Chicago, and the Van Leer group of container manufacturing companies in the Netherlands, recently announced that they will combine their research



#### YOUR BEST BUY FOR STANDARD BROWN AND BLACK CLOSURES



Bleed-proof protection is an inherent chemical property of PLASKON Wood-Flour Filled

Urea closures. So why pay for "extras" that are yours automatically—when you mold with this new odor-free, color-fast compound?

The inherent properties of PLASKON Wood-Flour Filled Urea closures enable molders to produce a non-bleeding closure at a saving over other materials in many instances.

PLASKON Wood-Flour Filled Urea offers these features: High Torque Strength • Odor-free • Color-fast •

Hard, non-electrostatic surfaces · Scratch resistance · Unaffected by ordinary solvents and impermeable to volatile agents.

Molders find PLASKON Wood-Flour Filled Urea excellent for high-speed automatic operations. In addition to three years of pre-production research, this bleed-proof compound has been thoroughly tested and proved in commercial manufacturing equipment.

Today—take your first step toward investigating this new closure material. Write for technical data and molded samples of PLASKON Wood-Flour Filled Urea.

PLASTICS AND COAL CHEMICALS DIVISION

40 Rector Street, New York 6, N. Y.



and development efforts towards new and improved containers and processes for their manufacture, on an international basis. The two firms will operate a joint research laboratory, now being set up in England, with the joint development facilities in the Netherlands. There will be no merging of corporate interests outside of the collaboration in scientific research and technical development, the companies stated, except that Inland will become joint owner with Van Leer of Grotnes Machine Works, Chicago, manufacturer of industrial equipment including container-making machinery. Grotnes was previously a wholly owned subsidiary of Van Leer.

#### American Elects Three VPs

The election of three corporate vice-presidents of American Can Co., New York, was announced last month by William C. Stolk, president. They are Albert O. Degling, E. T. Klassen, and C. F. Lausten. All are with the company's Canco division and continue in charge of their respective departments in addition to their new corporate duties.

Mr. Degling is in charge of purchasing for the division and in his new post he supervises purchasing, traffic, real estate, and general services for the corporation. He joined Canco in 1935 and is managing director of American Can Co. de Venezuela, S. A.

Albert O. Degling

In charge of the division's

E. T. Klassen

industrial relations for the past four years, Mr. Klassen now also handles corporation-wide industrial relation policies. With Canco since 1925, he has held posts in industrial relations since 1942.

Mr. Lausten is head of the division's equipment department. In his new post he is in charge of company-wide research, development, and machinery. Mr. Lausten joined the firm 31 years ago.

Roger H. Lueck, a corporate research vice-president, continues in that capacity in association with Mr. Lausten.

#### Acepak Brochure

A fully illustrated, twocolor, four-page folder describing its contract packaging operations was made available last month by Acepak, Inc., Chicago. Mixing, compounding, filling, cartoning. warehousing, and shipping operations are shown in some of the 13 photographs reproduced in the

Acepak offers a complete service which includes product development, compounding, packaging, as well as warehousing and drop shipping. All types of filling services for pastes, powders and liquids are available in the firm's 50,000 square feet plant, which is equipped with flexible packaging and plastic tube equipment.

Copies of the folder and other information on Acepak's operations are available from the firm at 7230 South Chicago Ave., Chicago 19.

#### **O-I Earnings Increase**

Earnings of Owens-Illinois Glass Co., Toledo, O., increased in the first quarter of this year to \$7,834,997, or 98 cents a share, compared with \$6,566,417, or 80 cents a share, for the corresponding period in 1958. Sales were \$123,396,514, against \$119,323,820 in the 1958 quarter.

#### **Metro Appoints Lewis**

Everett E. Lewis has been named metropolitan sales manager in the New York area for Metro Glass Co., Jersey City, N. J., it was announced last month by Jerry P. Moore, vice-president. For the past 11 years Mr. Lewis had been a sales representative in the New York area for Owens-Illinois Glass Co., Toledo, O.

C. F. Lausten





Everett E. Lewis



### NEW Erade Marks

THE following trade marks were published in recent issues of the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of \$25 must accompany each notice of opposition.

Sani-Jan—This for floor wax and glass cleaner and polish. Filed Sept. 24, 1958 by Foremost Supply Co., Kalamazoo, Mich. Claims use since June 6, 1958.

June 6, 1958.

Shine-Up—This for preparation for cleaning and waxing. Filed
Nov. 10, 1958 by S. C. Johnson & Son,
Ir.c., Racine, Wis. Claims use since
Aug. 29, 1958.

Foote's - This for chemical cleaning preparation used on white sidewall tires of automobiles and trucks. Filed April 7, 1958 by Foote's White Wall Cleaner Co., doing business as Foote Manufacturing Co., Henderson, Tex. Claims use since Dec. 10, 1957.

Keego - This for detergent powder for utensils and equipment, detergent especially machine dishwashing. Filed May 26, 1958 by Wyandotte Chemicals Corp., Wyandotte, Mich. Claims use

since Jan. 1, 1937.

Enca—This for acne acid detergent soap. Filed Sept. 5, 1958 by Edward J. Burke, doing business as Burke's Prescription Center and Dira Derm Soap Co., Albuquerque, N. Mex.

Claims use since Nov. 1, 1956.
CN Plus—This for germicidal liquid detergent. Filed Sept. 15, 1958 liquid detergent. Filed Sept. 15, 1958 by West Chemical Products, Inc., Long Island City, N. Y. Claims use since July 8, 1958.

Fain—This for liquid saponaceous material for use in the bath. Filed Oct. 15, 1958 by John D. Giagnonava doing business as Moutin Many.

cavo, doing business as Martin Manufacturing Co., Quakertown, Pa. Claims use since June 1958.

Surg-I-Kleen—This for detergent. Filed Oct. 31, 1958 by Klenzade Products, Inc., Beloit, Wis. Claims use since Sent 19, 1958.

since Sept. 19, 1958.

Super Kemite—This for liquid cleaner and degreaser. Filed Nov. 10,

1958 by The Betco Corp., Toledo, O. Claims use since Oct. 20, 1958.

C-Em-Shine — This for combined cleaner and polish. Filed Nov. 12, 1958 by St. Lawrence Chemical Co., Ogdensburg, N. Y. Claims use since July 28, 1953.

Co., Ogdensburg, N. Y. Claims use since July 28, 1953.

Hy Chrome—This for metal polishes. Filed Nov. 14, 1958 by Hysan Products Co., Chicago. Claims use since Oct. 9, 1958.

Bite Me Not—This for insect repellent. Filed Mar. 11, 1958 by David M. Lenger, doing business as Arlenge Laboratories, New York. Claims use since July 1957.

Swat Kill—This for insecticides. Filed April 15, 1958 by Hayes-Sammons Chemical Co., Mission, Tex. Claims use since Feb. 12, 1958.

7-11—This for insecticides. Filed Oct. 6, 1958 by Cenol Co., Chicago. Claims use since on or before

July 1, 1926.

Smith—This for liquid dirt solvent used for general house-hold purvent used for general house-hold purposes, a concentrated glass cleaning solution, floor scrubbing soaps, vegetable oil soap, and surgical soap. Filed July 9, 1956 by H. V. Smith Co., St. Paul, Minn. Claims use since Jan. 4, 1956.

Jan. 4, 1956.

Diophor—This for detergent sanitizer. Filed Oct. 31, 1958 by Klenzade Products, Inc., Beloit, Wis. Claims use sirce Sept. 19, 1958.

Konduct—This for detergent. Filed Oct. 31, 1958 by Klenzade Products, Inc., Beloit, Wis. Claims use since Sept. 19, 1958.

Nos-O-San—This for detergent. Filed Oct. 31, 1958 by Klenzade Products, Inc., Beloit, Wis. Claims use since Sept. 19, 1958.

Scroap—This for soap. Filed Oct. 31, 1958 by Klenzade Products, Inc., Beloit, Wis. Claims use since Sept. 19, 1958.

Scroap—This for soap. Filed Oct. 31, 1958 by Klenzade Products, Inc., Beloit, Wis. Claims use since Sept. 19, 1958.

Staph-I-Cide—This for deter-

Staph-I-Cide—This for detergent. Filed Oct. 31, 1958 by Klenzade Products, Inc., Beloit, Wis. Claims use since Sept. 19, 1958.

Hydene—This for cleaning compound for floors, walls, metal, and

other industrial and institutional uses. Filed Nov. 3, 1958 by Hysan Products Co., Chicago. Claims use since Oct. 21,

#### New Celluplastic Jar Line

A new line of rigid, linear polyethylene jars for the chemical, cosmetic, and industrial fields, was introduced recently by Celluplastic Corp., Newark, N. J. The jars are constructed of "Marlex," produced by Phillips Chemical Co., Bartlesville, Okla., and standard closures are supplied by several companies including Crown Cork & Seal Co.,

New rigid, polyethylene plastic jars introduced recently by Celluplastic Corp., Newark, N. J.



Philadelphia, and Armstrong Cork Co., Lancaster, Pa. Reported to be one-fifth lighter than comparable glass containers, the jars can be printed in up to four colors. Stock sizes currently available include one-quarter, three-quarters, two, four, eight, 16, and 32 ounce sizes.

#### Joins Southwestern

Appointment of John J. Redmon as regional sales manager for Southwestern Steel Container

- \* -



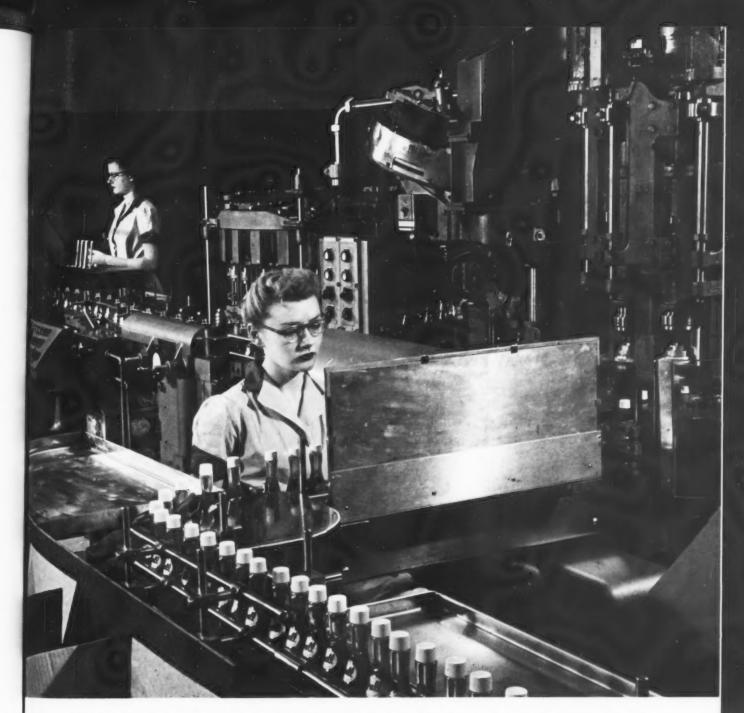
John J. Redmon

Co., Dallas, Tex., was announced last month by Gordon D. Zuck, president. Mr. Redmon will make his headquarters in Dallas and will cover the southwestern states.

Southwestern Steel Container Co. manufactures a complete line of steel pails in all sizes and styles, with "Hi-Bake" linings and fully lithographed.

#### **New GCMI Booklet**

A 60-page illustrated booklet was published recently by the Glass Container Manufacturers Institute, Inc., New York, describing the operations of the glass container industry during 1958. Titled "Glass Containers-1958," the brochure contains statistics of glass container shipments for the past 30 years as well as breakdowns of glass container production and descriptions of production methods. The industry as a whole is broken down into sections for glass container end uses for the chemical. drug and cosmetic, food, and beverage industries.



#### Why large soap and synthetic detergent firm has used Knox bottles for nearly six years

One of the world's largest and most successful soap and synthetic detergent manufacturers\* uses Knox Glass bottles on its toilet goods lines.

The company's attitude toward glass containers has been summed up by one spokesman like this:

"Our glass container specifications are generally tighter than most industries, and we insist that they be met. We are constantly keeping quality control checks on our containers—from the time they come into the plant until the time they are taken off the shelf.

"Naturally, we use only those bottles which consistently meet our high demands."

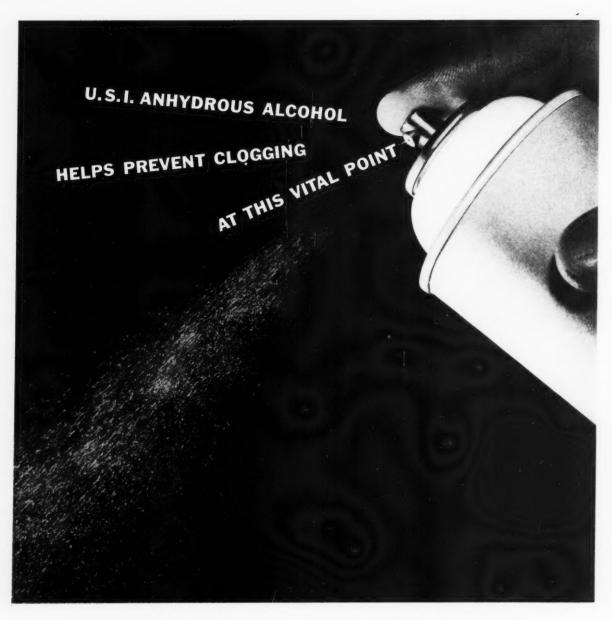
Knox Glass, Inc., has supplied toilet goods bottles to this manufacturer for nearly six years.

Find out more about the glass quality and high standard of service available to you from Knox's eight plants and 35 sales offices.

Contact your nearest Knox representative, or Knox Glass, Inc., Knox, Pennsylvania.

\*Name available on request.

 $the \ new/{ t knox}$  glass

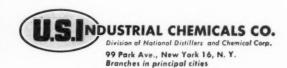


The experience of more than a decade shows that U.S.I. anhydrous (water-free) alcohols help prevent clogging of the valve . . . a fact that takes on more and more importance as competition increases among aerosol products.

Furthermore, U.S.I. specially denatured alcohols contribute to a steady spray rate and promote even particle distribution. This results from their outstanding compatibility with a great variety of concentrates.

Because U.S.I. anhydrous alcohol formulas are free of water, water-corrosion of containers is eliminated as is water-insolubility of aerosol ingredients. They are produced under rigid quality controls that assure uniformity of specifications. Nationwide distribution assures you of prompt service and delivery of tank, drum or 5-gallon quantities.

If you have a specific aerosol problem perhaps a U.S.I. Tech: ical Service representative can help you find a practical and economical solution. Write for technical data and prices.





### SHAMING CREAMS work up a sales lather in aerosol cans by CONTINENTAL

Solid success story: in four short years, aerosol shaves have hit the top of the shaving cream market (68 million cans in 1957 alone!) It was Continental, remember, who developed the low pressure aerosol can that started this phenomenal market on its runaway path. For your shaving cream, you can't do better than a Continental aerosol, superbly lithographed by Continental experts. Precision-made Continental aerosols are most economically priced. Take your pick from eight sizes and many different styles. You get fast delivery of all the aerosols you need from Continental's greatly expanded production facilities. Research and engineering services are available, plus introductions to valve suppliers and commercial fillers. For aerosols with solid sales power, call Continental today.

CONTINENTAL (C) CAN COMPANY

Eastern Division: 100 East 42nd Street, New York 17 Central Division: 135 South La Salle Street, Chicago 3

Pacific Division: Russ Building, San Francisco 4
Canadian Division: 5595 Pare Street, Montreal, Que.

CONTINENTAL MAKES AEROSOLS FOR EVERY USE ... IN THE WIDEST RANGE OF SIZES





INSECTICIDES





BANDAGES









SHOE POLISH



ANTISEPTIC







#### PRESSURE PACKAGING

#### Abelson to Fluid

Ron Abelson recently joined Fluid Chemical Co., Newark, N. J., as a salesman in the New York

Ron Abelson

Metropolitan area. Fluid is an aerosol contract loader and does conventional custom filling in both metal and glass containers.

For the past two years Mr. Abelson covered the metropolitan New York and northern New Jersev areas as a sales representative for Crown Cork & Seal Co., Philadelphia. In his new position he sells Fluid's services from his headquarters in New York.

#### Aerosol P.R. to Odell

The Aerosol Division of the Chemical Specialties Manufacturers Association recently appointed Norman Odell Associates, Inc., New York public relations agency, to handle its publicity and promotion program. The agency reports that during fiscal 1959-60 the program will be directed primarily to consumers, but will also include a communications program to retailers keeping them up to date on sales promotion techniques for aerosol products.

Mr. Odell had been with G. M. Basford until late last year, when he resigned to form his own firm. Basford had handled the publicity program of the Aerosol Division since the inception of the program three years ago.

#### Risdon Shifts Beardworth

Donald A. Beardsworth has been appointed midwestern manager of the aerosol and industrial products division of Risdon Manufacturing Co., Naugatuck, Conn., it was announced early in May. Mr. Beardsworth succeeds Andrew Peasco, who is returning to Risdon's headquarters' office for a new assignment.

Mr. Beardsworth will assume his new post, effective July 1. He will work out of Risdon's Chicago office at 224 S. Michigan Ave., and will cover Illinois, Indiana, Wisconsin, Iowa and Minnesota.

Risdon's aerosol division manufactures valves and complete aerosol containers for home products, fragrance and pharmaceutical industries. The industrial products division fabricates drawn and formed metal components for a wide range of industrial and consumer products. Risdon's plants are located in Naugatuck, Danbury and Waterbury, Conn.

Prior to joining Risdon late last year Mr. Beardsworth was a

Donald A. Beardsworth



sales engineer with Union Wire Die Corp., New York, and prior to that was with Hunter Spring Co., Lansdale Pa.

He is a mechanical engineering graduate of Georgia Institute of Technology.

#### Colton Appoints Kinsley

Lewis H. Kinsley has been appointed chief engineer, packag-



Lewis H. Kinsley

ing machinery, for Arthur Colton Co., Detroit, Leo P. Gajda, vice-president—engineering, announced last month. Mr. Kinsley was previously vice-president—engineering of the Hope Machine Co., Philadelphia, which was acquired by Colton last March. He had been associated with Hope for 24 years.

In his new position Mr. Kinsley directs the design and development of the Colton line of filling equipment including Colton, Colton-Hope, and Colton-Alpha machines.

#### Air Reduction VP Retires

H. W. Sunders, district manager and vice-president—San Francisco district, for Air Reduction Pacific Co., the west coast industrial gas and welding products division of Air Reduction Co., San Francisco, retired June 1 after 41 years with the company. On that date he reached the firm's mandatory retirement age. Mr. Sanders is succeeded by L. A. Hamilton, vice-president—Seattle, Wash., district, who has been with the company since 1930.

AEROSOL



### PACKAGING

# may be the propelling force that your sales need!

You've seen many aerosol products "take off" on a sharply rising sales curve. Hair sprays. Colognes. Room deodorants. Today's new pharmaceutical aerosols. And hundreds more. Perhaps your product has similar potential—and needs only the propelling force of aerosol packaging to start sales zooming for you.

### Would your product be "better" as an aerosol?

If it can be sprayed, brushed on, dusted or daubed, your product is a likely candidate for aerosol packaging. As a leading producer of aerosol propellants—the "Genetrons"—General Chemical will be glad to help you get started.

#### Help in making and marketing

General Chemical offers many helpful services to present and prospective aerosol marketers. For example, we can tell you about promising new aerosol formulations developed in our "Genetron" laboratories . . . and can assist in the development of your own new aerosol formulation. Our specialists will study your formulation requirements and help you determine the proper "Genetron" propellant compatible with your product, its container and its uses. We will

also be glad to put you in touch with highly capable contract fillers in all parts of the country who will work with you from the planning and testing of your product through to commercial filling—without any outlay on your part for plant or equipment.

#### General Chemical services include:



New Product Ideas



Technical Assistance with Product Development and Formulation

All these services are readily available. Taking advantage of them may enable *you* to make a good product a "better" one... send it rocketing to higher sales.

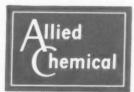
For further information—or if you would like to arrange for a special presentation—write today to "Genetron" Dept., General Chemical Division, Allied Chemical Corporation.

genetron

AEROSOL PROPELLANTS

Putting the "push" in America's finest aerosols

Basic to America's Progress



GENERAL CHEMICAL DIVISION
40 Rector Street, New York 6, N. Y.



### NOW-

THE FIRST GLASS ENCLOSED SANITARY
HIGH SPEED LINE FOR PRESSURIZED
FOOD PRODUCTS . . .

Three other high-speed
lines are available
for loading metal or
glass aerosol containers
that do not require
completely sanitary

Stalfort, the country's largest filler, can also load liquids, waxes, or creams in conventional glass or metal containers. An all-stainless-steel line for loading pressurized food products in aerosol containers under sanitary conditions is now in operation at Stalfort's modern Pressure-Pak plant. Completely segregated in a glass-enclosed area, this line is dismantled and sterilized before and after each production day. Any food product suitable for aerosol dispensing, even powder, can be economically handled in this area.



STALFORT & SONS, INC.

Established in 1868 321 W. Pratt Street, Baltimore 1, Md.

#### New Colton-Alpha Crimper

A Colton-Alpha adjustable crimper was introduced recently by Arthur Colton Co., Detroit. The unit, a 12-station rotary model (#1351-12), has an adjustable conveyor infeed worm and new starwheel for all size aerosol cans. The crimper operates at speeds of 200 cans per minute or better, according to W. A. Doepel, sales manager. Crimping heads are claimed to be fully adjustable so that crimp diameter can be varied to accommodate both aluminum and steel containers. An adjustment device is also incorporated which takes up the wear of crimping jaws. Another adjustment is provided which allows for proper depth of crimp. The can locating bell is spring loaded to avoid damage to cans and is so arranged that it properly orients the valve before pressure is applied.

Also on display at the Colton booth at the Packaging Show in Chicago in April were two hand operated models, an aerosol bottle crimper and an aerosol can pressure filler. These models are said to employ crimping and pressure filling heads identical with those used on the rotary models.

#### **VCA** Actuator Lock Device

Two new "Mist-Top" perfume and cologne dispensers were designed recently by Valve Corp. of America, Inc., Bridgeport, Conn., incorporating the optional feature of a cam locking device which locks the actuator to prevent accidental release of the product. Available to cosmetic packagers. fillers, and manufacturers, the dispensers come in a 16 cc. perfume size and two-ounce unit for colognes. The perfume container is fitted with a 50 mg. metered valve while the cologne dispenser has either a metered 50 or 100 mg. valve or a non-metered nylon valve.

Components of the "Mist-Top" are plastic and are encased in an aluminum, alcohol resistant cap which is available in gold with standard orders or in other colors upon request. Aluminum tube is



New Colton-Alpha 12 station adjustable rotary crimper (model 1351-12). In background are: (left) hand operated aerosol bottle crimping device, and, right, an aerosol can pressure filler. Crimping and filling heads are interchangeable.

manufactured by Peerless Tube Co., Bloomfield,N. J., and lettering or other descriptive matter is silkscreened by Permolast, Waterbury, Conn.

#### Krylon Fluorescent Paints

Fluorescent paint in six colors was recently introduced in aerosol dispensers by Krylon, Inc., Norristown, Pa. They can be used on almost any white surface, according to Richard C. Newbold, vice-president—sales, including: paper, wood, cloth, glass, metal, some plastics, and "Styrofoam," The six colors include gold, yellow, red orange, yellow orange, cerise, and green. The two shades of orange are reported to meet requirements for high visibility markings on aircraft. The paints have application

New cam-lock device from Valve Corp. of America, Inc., Bridgeport, Conn., prevents accidental release of products. Turn of the cap locks the valve. At left is cologne dispenser with locking unit in place and, at right, is the locking device showing how it fits to conform with the accompanying "Mist-Top" button.



### The answers to aerosol valve needs are being developed and perfected daily at Precision . . .

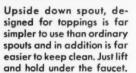
#### THIS MEANS ADDITIONAL PRODUCT SALES FOR YOU!





A Precision stream spout for dispensing any product, regardless of viscousity, that will pour. Currently most toothpaste and syrup manufacturers, are using this practical and attractive unit.







This graceful spout has proven to be a profitable way of dispensing pharmaceuticals and cosmetics. Combined with Precisions metering valve, it dispenses a pre-determined amount with a touch.

 At Precision there is a continuing program of research and development, for each day brings new products to be packaged in aerosol containers. The success of aerosols, is based on functional design and attractive appearance for these two go hand in hand to improve dispensing and increase sales.

Perhaps your product, whether it be dispensed as a foam, a spray, a drop or a stream, should be adapted to an aerosol package. Aerosols have proven, an increase in sales because of appearance, economy and simplicity of use. Precision engineers will be most happy to talk with you.



PRECISION VALVE CORPORATION, 700 NEPPERHAN AVENUE, YONKERS, N. Y.



for displays, posters, markers, toys, and stenciling. A 16-ounce can retails at \$2.79.

#### Carrubba Joins Aero-Chem

The appointment of Philip Carrubba as technical director of Aero-Chem Laboratories, Bridgeport, Conn., was announced recently by Charles Rader, president. The firm specializes in filling metered aerosol containers.

Previously Mr. Carrubba was chief control chemist for Connecticut Chemical Research Corp., Bridgeport, where he was responsible for the establishment and maintenance of specifications and the control of all aerosol production.

Mr. Carrubba also has had experience in research and production and the development of aerosol formulations and packaging.

#### Philip Carrubba



**JUNE, 1959** 



Artist's sketch, top picture, is of new aerosol plant now under construction for S. C. Johnson & Son, Inc., Racine, Wis., which will adjoin present shipping center at nearby Waxdale. In bottom picture, R. P. Gardiner, vice-president — manufacturing, lifts first spade full of earth at ground-breaking ceremonies for construction of the the new plant. Löoking on are H. M. Packard, Johnson president, second from left, production division executives, and Waxdale shipping center personnel. They are, left to right, H. J. Bowman, E. W. Larsen, C. E. Folwell, H. W. Chapman, C. E. Sherwood, L. C. McConnell, V. I. Erickson, R. Bohn, and H. A. Richow.

#### Johnson's Aerosol Plant

Ground was broken last month for the construction of a new plant for S. C. Johnson & Son, Inc., Racine, Wis., to be used exclusively for manufacturing the company's aerosol products. The move represents a departure for Johnson's which is one of the largest aerosol marketers in the United States. Previously the company's aerosol products have been loaded by Continental Filling Co., Danville, Ill.

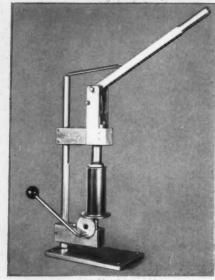
The new plant will adjoin the Johnson's Wax shipping center at Waxdale, eight miles from Racine. Its cost is over \$1 million.

The new structure will con-

tain manufacturing facilities and filling lines for production of pressure-dispensed products in the company's automotive, air freshener, insecticide, and furniture polish lines. Equipment installation is expected to start in November and production will begin by Jan. 1, 1960, according to R. P. Gardiner, vice-president—manufacturing. The new plant is part of a \$4 million building program announced earlier this year by the company.

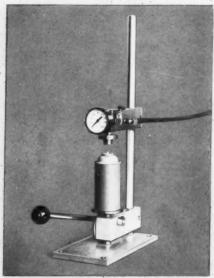
Aerosol products marketed by Johnson include "Raid" insecticide; "Off" insect repellent; "Pledge" furniture polish and "Glade" room deodorant.

# Thinking about an ackage for your product?



THIS Valve Crimper, which seats the valve in position and seals the can.

Test it for only \$55 a month rental with *Mojonnier* laboratory equipment in your own plant



AND THIS Nitrogen Gasser, which applies the gaseous charge ...

ARE ALL YOU NEED TO GET STARTED.

THE MOST SATISFACTORY way to dispel any mystery over aerosol packaging is to test it yourself, in your own plant, with your own laboratory personnel.

Mojonnier Associates, first in aerosol packaging and largest manufacturer of complete aerosol packaging lines, now make such a test possible. You can rent the necessary laboratory units for as little as \$55 a month.

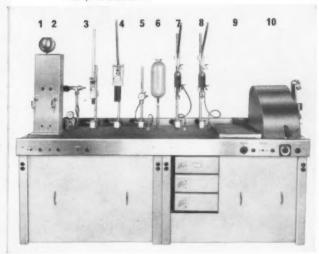
In most cases, the two manual units shown at the left are all you will need. Additional testing units—or the complete Mojonnier laboratory testing line—can also be rented at modest rates.

Leading suppliers of cans, valves, and propellants will gladly cooperate in your test program.

Let us help you make those tests. There is a Mojonnier sales or service engineer in your area ready to discuss with you any phase of aerosol testing or production. Write or call Carter N. LeBeau, Sales Manager, Mojonnier Associates, Dept. S, 9151 West Fullerton Avenue, Franklin Park, Illinois. Telephone GLadstone 5-1013.

When you are ready to discuss volume production, our engineers will advise you on the right Mojonnier automatic packaging machinery for your particular needs.

The ten Mojonnier aerosol packaging units assembled (below) in a complete laboratory testing line, with table and refrigeration equipment, can be rented all together for \$900 a month.



Each of the above test units is also available separately, or in any combination, for the low monthly rentals listed here. Rental fees may at any time be applied to purchase price.

- 1-2. Cold fillers for releasing measured quantity of refrigerated product or propellant, \$200 per month each.
- Valve Crimper for cans, \$25 per month.With vacuum attachment, \$37 per month.
- 4. Valve Crimper for bottles, \$35 per month.
- Nitrogen Gasser for applying gaseous charge, \$30 per month.
- Propellant Filler for low-pressure liquids, \$10 per month.
- 7-8. Propellant Fillers for pressurized liquids, \$65 per month each.
  - 9. Water Bath, to test for leaks, \$45 per month.
- Tumble Gasser for dissolving soluble propellant into product, \$105 per month.



# WE'VE GOT A NEW NUMBER HICKORY 6-7640





Hobart (Ind.) Plant Number is Hobart-281

CONTINENTAL FILLING CORPORATION

Danville, Illinois

#### **METERED SPRAY** AEROSOL SPECIALISTS

Exclusive, specially designed equipment for fast production of all metered dispensers.

RESEARCH to develop the right product QUALITY CONTROL to make the package market

PRODUCTION to handle small and large volume of all type Aerosol products

Make it a point to talk to "AERO-CHEM" first

quality AEROSOL PACKAGING service. AERO-CHEM LABS, Inc. 1983-B State St., Ext. Phone: Edison 3-4181 BRIDGEPORT 5, CONN.



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#### FLORIDAS' OLDEST CONTRACT PACKAGER

Your product can be packaged in America's fastest growing market AT NO COST TO YOU. The freight saved usually pays the bill. COMPLETE FACILITIES FOR MANUFACTURING, PACKAGING, STORING, AND SHIPPING LIQUIDS, POWDERS, CREAMS.

LONG OR SHORT RUNS

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#### serve you!

#### G. BARR & COMPANY PRIVATE LABEL AEROSOLS

Enjoy the advantage of G. Barr & Company multiple plant operation and packaging know-how. Unsurpassed research, production and shipping facilities. No finer service available. Contact our nearest plant.

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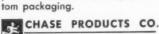
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· No minimum run required and no maximum limit! Rigid quality control is maintained on all production, contract filling or cus-



Maywood, Illinois

Marketing

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FOR FOOD, DRUGS, PAINTS AND CHEMICAL SPECIALTIES GARD now offers the most complete, most modern filling facilities in the industry for acinities in the industry for all aerosols from food to paint. Minimum production runs— as low as 1,000 cans to 1,000,000 and up! Air-conditioned, hu-midity controlled throughout. GARD INDUSTRIES, INC. Northfield, Illinois

# PETERSON

#### FILLING & PACKAGING CO

Contract Aerosol and Liquid Filling

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#### YOUR FORMULA

or our specialists will help compound, package or label

aerosols, toiletries, tablets, liquids, food products, etc.

60 years' experience. Quality con-trols. For details with no obligation, write or call

J. D. GILBERT, President

W. T. RAWLEIGH CO. Freeport, III.



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Reduce your packaging cost by letting us package for you. We also warehouse and ship.

Large or Small Runs

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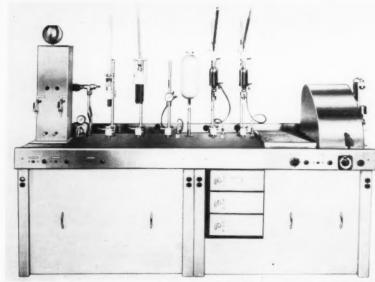
in this space would reach prospects for custom filling service from coast to coast for only

\$20 per month

#### Mojonnier Rental Plan

Complete laboratory equipment with which prospective aerosol packagers can do their own experimenting and investigating may now be obtained under a rental plan from Mojonnier Associates, Franklin Park, Ill. A valve crimper and nitrogen gasser for manual aerosol packaging to study problems such as product viscosity. precipitation or separation, and interaction with propellants, may be rented for \$55 per month. Eight other laboratory testing units are available under the plan at rentals from \$10 to \$200. Rental fees may be applied to the purchase price at any time, the company says.

Mojonnier, a 12-year old firm and a leading manufacturer of aerosol packaging lines, became a division of Kartridg-Pak Machine Co. last October. It expects the new rental plan will double the potential market for its machinery within 18 months. A complete lab-



Complete aerosol packaging-testing line for laboratory use offered on a rental basis by Mojonnier Associates, Franklin Park, Ill. Second and fourth units from left are can crimper and nitrogen gasser, respectively, which rent for \$55 per month.

oratory set-up of the equipment offered for rental was displayed at the National Packaging Exposition in Chicago in April.

#### Schrader's Sets Vacation

A Schrader's Son, Brooklyn, N. Y., manufacturers of pneumatic valves, recently announced that its office and factory will be closed for two weeks for summer vacation beginning Monday, July 27, and will reopen Monday, August 10. The company will not receive shipments during this period.

#### Pennsalt Names Ricca

C. Brooks Ricca was recently appointed sales manager for "Isotron" propellants by Pennsalt Chemicals Corp., Philadelphia. Previously district sales manager

C. Brooks Ricca





#### Complete **AEROSOL SERVICE**

**Small Runs Solicited** 

Insecticides, Deodorants, Tooth Paste, Shave Cream, Cosmetics, Toiletries, Household & Industrial Products, Powders, Colognes, Plastic Sprays, etc.

Colognes, Plastic Sprays, etc.

Experts in formulation and development • strict quality control • ample storage • pressure and "COLD Filt." lines • samples and experimental work at no charge • special plan for companies requiring mational distribution.

Write or phone for details—no obligation

#### SUN-LAC, INC.

274 Lafayette St. • New MArket 3-7727 Newark 5, N. J

for the company's metal processing chemicals, Mr. Ricca now directs national sales activities for the firm's full line of propellants. He joined Pennsalt in 1950 as a metal processing chemicals salesman.

#### **Aerosol Can Coder**

The introduction of an imprinting attachment for coding the bottoms of aerosol cans on automatic filling lines was announced early in May by Adolph Gottscho. Inc., Hillside, N.J. Designated "TB Aerosol Coder", the imprinter is said to operate at speeds of up to 600 cans per minute. The imprinter can accomodate cans of different sizes without use of change parts. Adjustments for both speed and can size can be made

omasson

AEROSOL FILLING for Private Label Marketers

Also Liquid Filling

Complete research and laboratory facilities Constant quality control Norristown, Pa. BRoadway 5-4355

"in minutes", the maker says.

The coder does not require cutting into an existing packaging line, nor does it need any "dead" plates. Incorporating a simplified 2-roll, fast-dry, fluid inking system. the unit provides sharp, permanent imprints of one or more lines even on bottom surfaces recessed as much as 58ths inch. The coder is said by Gottscho to hold enough ink for 'round-the-clock operation. Installation can be made by the user in a few hours.

#### Robins Valve Decrimper

Robins Engineering Co., North Haven, Conn., has introduced a valve decrimper and remover for aerosol containers which makes possible the salvaging of re-

**PROGRESSIVE** AEROSOL FILLER Compare our

CALIFORNIA'S

\* PRICES

\* QUALITY

and CONFIDENTIAL SERVICE

#### E

FILLS ALL PRODUCTS

WESTERN FILLING CORPORATION 6423 BANDINI BLVD., LOS ANGELES



Robins' valve decrimper and remover.

ject units. The machine can be incorporated into an existing aerosol production line where it automatically removes the standard one inch cup valves and automatically disposes of them. A new valve is then inserted and the can is recrimped and re-gassed. Claimed to be sanitary and completely automatic, the unit is mounted on a three inch pipe stand, and is operated by a four inch air cylinder with a six inch stroke. The company points out that a longer stroke is needed for valves with dip tubes so that they will clear the cans. The unit requires a 110 volt electrical connection and a 100 psi air supply and Robins claims that the decrimper will not damage containers or contaminate their contents.

#### New VCA Sales Rep.

Valve Corp. of America, Inc., Bridgeport, Conn., recently announced the appointment of Buckingham Associates, 7634 North Rogers Ave., Chicago, as its midwest sales representative. Buckingham was organized five years ago and specializes in package design.

New imprinting attachment of Adolph Gottscho, Inc., Hillside, N. J., for coding the bottoms of aerosol cans on automatic filling lines. The unit, designated, "TB Aerosol Coder", is said to operate at speeds of up to 600 can's per minute.





# board meeting!

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# Production...

**EQUIPMENT** · MATERIALS · PROCESSING

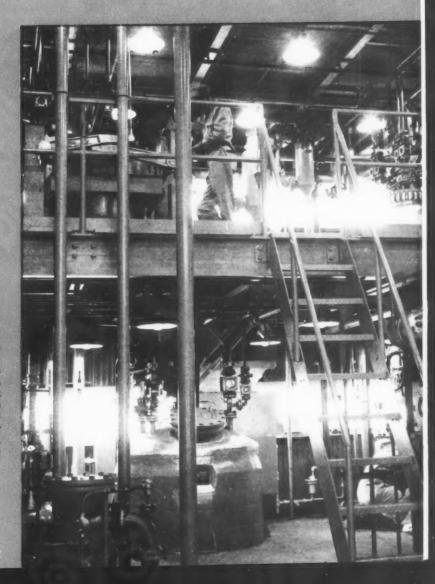
Book Reviews

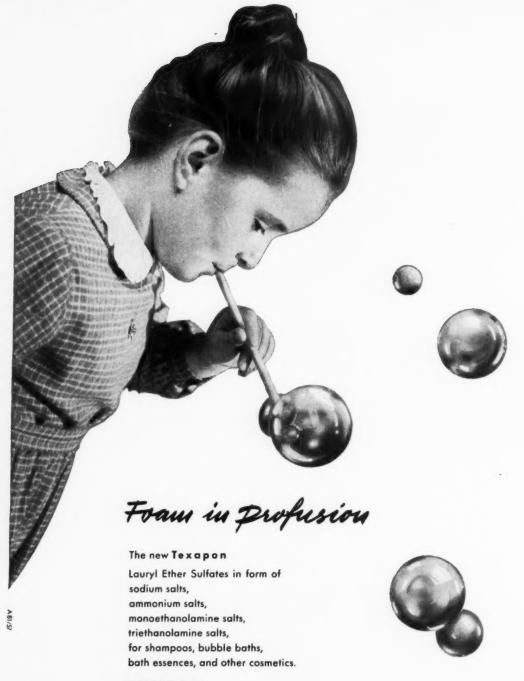
Products and Processes

New Patents

Bulletins and Equipment

Polymer pilot plant put in operation earlier this year by A. E. Staley Manufacturing Co.. at Decatur. Ill.. is now in semi-works production of acrylic resin emulsions. Staley, a corn and soybean processor, recently announced plans to acquire UBS Chemical Corp., Cambridge, Mass., producer of polymers for floor finishes and other applications.





#### **TEXAPON**



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# Production SECTION

# Blending of Aerosol Propellants

As number of pressure packaged items grows it becomes more feasible for the loader to blend his own propellants—here are five ways

P to the present time, most organizations using aerosol propellants have not attempted to carry out extensive blending, but have purchased the blended propellant of suitable composition from the supplier.

This mode of operation was satisfactory as long as a limited number of aerosol products was produced and only a few blends were required. Propellant storage was a simple matter. But, because of the multiplicity of products being pressure packaged today, the number or propellant blends required can no longer be limited, and a serious inventory problem has arisen. For this reason, fillers have been giving increasing consideration to the feasibility of buying the individual components and preparing specific blends as required.

Blends may be produced by any of five different means, which are identified by the equipment each requires, as follows:

- Weigh tank mounted on a scale or hydraulic weighing system.
- Positive displacement proportioning pumps.
- 3. Displacement meter to a batch tank.
- Radiation equipment measuring liquid density.
- Continuous proportioning system.

Each system has its inherent

By E. E. Husted\*

Union Carbide Chemicals Co. New York, N. Y.

advantages and disadvantages. Selection of the suitable system is a highly individual matter, based on individual production needs. Therefore, no attempt will be made to suggest an ideal, but simply to outline what can be expected from each system. Anyone interested in propellant blending for his own plant, can get help and advice from his primary supplier of propellants.

Before discussing each of the

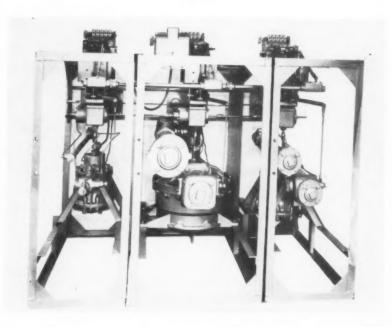
systems, two principles essential to accurate blending should be given emphasis. First, provision must be made to insure that the propellants remain liquid. Second, it must be kept in mind that, with changes in temperature, there are wide changes in the density of liquefied gases. These two basic principles simply cannot be overemphasized.

We shall now review each method of blending:-

#### Weigh Tank Method

 The first system is based on the use of a weigh tank. This method involves simply the intro-

Figure I



<sup>\*</sup>Paper presented at the 45th midyear meeting, Chemical Specialties Manufacturers Association, Chicago, May 19, 1959.

# CAPEM SCREW CAPPERS

Speed production for Texize Chemicals, Inc.



CONSOLIDATED PACKAGING MACHINERY CORP.

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duction of each component successively into a pressurized batch tank and controlling proportions by weighing each by difference. It is necessary to provide a circulating pump to insure adequate mixing.

This method offers two advantages. First, no matter how many components are to be blended, no additional equipment is required, Second, it is one of the more inexpensive methods in terms of capital expenditure.

However, there are disadvantages: The method is slow, because it requires filling the weigh tank, then emptying, probably into a holding tank. Another disadvantage is that any such batch operation requires a tank of specific size, while the size of the batches to be mixed may vary widely. If that batch tank is designed to handle 8,000 gallons, for instance, and subsequently you wish to mix a batch of 1,000 gallons, it will be difficult to get exactly the right blend. This is true because, with a small amount of material in a large tank, the vapor phase will have a high concentration of the low boiling compound, and the liquid phase will be light in a low boiler.

Another disadvantage is that it usually is impossible to know beforehand the exact amount of the material that will be consumed during a run, due to normal production variations. There will usually be an underage or overage, creating the need for either an additional batch or the disposal of a surplus.

Also, a weigh-tank system may be somewhat inaccurate due to the relatively large weight of the storage tank versus the weight of product to be metered out, so that special care must be taken to maintain accuracy within plus or minus one per cent.

The cost of this system is quite obviously directly related to the size of the weigh tank. The following table will give an approximate idea of cost, including weigh tank and scale:

Capacity in gallons	Cost in dollars
6.000	\$10,500
3,500	7,500
2,400	6,200
1,500	4,600
1,000	4,000

#### **Proportioning Pumps**

2. The second blending system entails the use of positive displacement proportioning pumps. In all probability, this would be economical only for a pressure filling line. In such an application, economies result from using the proportioning pumps to discharge directly into the aerosol containers on the pressure filling line itself.

In considering this system, one precaution must be taken: A heat exchanger on the suction side of the pumps must be provided because, as this type of pump operates on the suction stroke, the low boiling liquid such as propellant-12 (dichlorodifluoromethane), must be kept at about —40 F. to remain in the liquid phase.

The cost of a system of this type (including the heat exchanger) capable of delivering at least 15 gallons of mixture, per minute, would be on the order of \$8,000.

#### Displacement Meter

3. The third system uses a displacement meter. This meter utilizes a wobble plate or rotating position instead of a reciprocating position. Such a system can be used most successfully in batch blending. The meter is set to deliver a given amount of material for the addition of each component. First one component, and then another, is metered into the tank. Some type of circulating pump is required to provide adequate mixing.

This system has essentially the same advantages and disadvantages as that of the weigh tank. The cost of this system also de-

Capacity of : batch tanks in gallons	Cost in dollars
6 000	\$9,400
3,500	6,700
2,400	5,400
1,500	4.000
1,000	3.500

pends on the size of the batch tank and of the meter, and would be approximately as shown in table below.

#### Radiation Equipment

4. The fourth method uses radiation equipment to measure the density of the mixture. With this type of equipment, a chamber three to six inches in diameter is inserted in the line at a point where the propellants are well mixed. Radioactive energy is passed through the chamber to measure the density of the mixture. This energy is converted to electrical energy, which, in turn, activates a control valve in one of the propellant lines, modifying the controlled line to compensate for changes in the mixture composition. For a radiation system to operate within the precision required, it is necessary to maintain a fairly constant temperature. The cost of the radiation controls and heat exchangers is about \$4,000.

#### Continuous Proportioning

5. The final method to be reviewed here entails the use of continuous proportioning units. This method unquestionably allows great ease of operation and maximum flexibility, although the capital investment required is substantial.

In this system, the different components pass through individual meters. The flow through one meter drives gearing, which synchronizes it in a fixed proportion to the flow through a second meter. If, for any reason, the flow in one meter increases or decreases, there must be a proportional change in flow through the second meter. If the variation should be so great that the blender cannot compensate, safety devices automatically shut down operation. With this type of equipment, it is quite possible to maintain an accuracy of plus or minus one per cent.

Currently, two primary types of equipment are available. Both systems have integrated control to



The Leaning Tower Pisa, Italy

he Leaning Tower, built about 1173 A. D., is 179 feet tall. It leans 16 feet off the perpendicular and is tilting at a rate of 14 inch per decade. It may collapse before this century ends.



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maintain the proportion of one component to another. Figure 1 shows typical blending equipment.

There is a basic difference between the two types of equipment: One requires an independent source of instrument air, while the other has a meter which directly activates the control valves.

However, in the case of the first type, it is easy to vary the rate of flow, whereas, with the second. the rate of delivery is fixed. It may sometimes be advantageous to vary the rate on a filling line which is used to fill a wide range of container sizes and where the variation in propellant requirement is appreciable. In fact, it is possible to gear the delivery rate of the first type to the rate of operation of the filling line, so that, as the filling requirement increases or decreases, the flow from the blenders is modified accordingly.

The inherent advantage in tying the blender to the filling stems from the fact that anyone of these blending systems only approximates the exact right blend at start-up, and may tend to hunt just a trifle in the early stages of operation. Therefore, if you use a fixed flow rate, requiring frequent stopping and starting to adjust to different rates, the unit will sometimes tend to fluctuate as it does at start-up. But a unit designed for variable rate of flow will reach and maintain equilibrium.

#### **Temperature Control**

In order to use the simplest system possible, it is necessary to maintain the temperature of the propellant as fed to the blenders at a relatively constant level. In order to accomplish this, the use of either a heat exchanger or a recirculation line leading back to the storage tanks is normally required. Once the system is operating, the temperature will remain relatively stable. But, at the time of start-up, material in the storage tank may vary widely in temperature from that in the lines. For example, as you start up in the winter, material in the lines inside the building will

CONTINUOUS FLUOROCARBONS BLENDING EQUIPMENT FOR AEROSOL FILLING LINES USING VOLUMETRIC METERS FLOW DIAGRAM

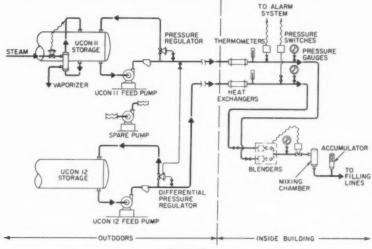


Figure II

be warm, but, as you draw from the storage tanks, it will get progressively colder, throwing the proportioning system off. This source of error is eliminated if the recirculation line is operated sufficiently at the outset to displace all material that was held in the lines inside the building.

Figure II shows a typical blending system. This layout incorporates all components to give maximum accuracy, and, in actual practice, some parts might be omitted.

The cost of such a system to deliver 15 gallons per minute runs to about \$7,000, for equipment. But, of course, it does provide maximum flexibility.

The above review shows that there is wide latitude in choice of a blending system. Each case should be studied in term of the individual production problem.

#### **NACA Photo Slides**

A photo slide program about pesticides and their use in protecting food supplies, property, and health has been produced and made available by the National Agricultural Chemicals Association, 1145–19th St., N.W., Washington 6, D. C. The program, titled "Pesticides—Boon to Mankind," is

designed for showing before business and professional clubs, garden clubs, women's groups, and similar organizations. It consists of 58 selected 35 mm color slides and a printed script and can be presented within 25 to 30 minutes with ordinary projection equipment.

#### **New Abstracting Service**

A new technical abstracting service has just been organized under the title "Selective Abstracts", Inc., 855 Avenue of the Americas, New York I. Abstracts cover literature in six industry groups: drugs; cosmetics - toiletries - pharmaceuticals; foods; plastics; paints; and advertising. They are culled from more than 1000 foreign and domestic trade and technical journals. Published twice a month, the abstracts are printed on detachable three by five inch cards.

Editorial director of the new venture is W. Philip Leidy, library consultant to Fritzsche Brothers, Inc., Dodge & Olcott, and Bristol-Myers Products Division. Anne D. Duca, chief librarian of the Chemists' Club, is managing editor. Abstracting editor in advertising is Ruth Kitchen, until recently advertising, and sales promotion manager for D&O. Anthony Errico, editor of Paint and Varnish Produc-



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- 6. T. H. Baylis Co.—Providence, R. I. 7. Benlo Chemicals—Milwaukee, Wisc.
- 8. Chemical Sales & Service Co.-Worcester, Mass.
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- 10. Coastal Chemical Co.-Abbeville, La. 11. Cole & De Graf-San Francisco, Calif.
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  13. Crowley-Thompson Chemical Co.—Cleveland, Ohio
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- 23. Pacific Polymers-Hawthorne, Calif
- 24. PB & S Chemical Co.—Henderson, Ky. 25. Plyce Products, Inc.—E. Boston, Mass.
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- Southwest Gas Equipment Co.—Liberal, Kan.
   Thompson-Hayward Chemical Co. (All offices listed below are Thompson-Hayward)

28A-No. Little Rock, Ark. 28B-Davenport, Ia. 28C-Des Moines, Ia. 28D-Wichita, Kan. 28E-Shreveport, La. 28F-Kansas City, Mo. 28G-Oklahoma City, Okla. 28H-Tulsa, Okla. 28I-Memphis, Tenn. 28J-Dallas, Texas. 28K-Houston, Texas. 28L-Lubbock, Texas. 28M-San Antonio, Tex. 28M-New Orleans, La.

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tion, handles the abstracts in the paint field.

Initial subscription for the service is \$125.00 a month. Additional copies of each issue may be purchased on a multiple copy basis.

#### Ross Develops Dissolver

A new high speed dissolver or disperser was developed recently by Charles Ross & Son Co., Brooklyn, N. Y. The machine features a specially designed impeller or millhead which mixes, disperses, dissolves, emulsifies and deagglomerates most types of liquid, paste, or heavy paste materials.

According to the company, the disperser can be used in any size tank or container from standard 55-gallon drums to tanks 40 inches in diameter by 45 inches deep. A hydraulic jacking unit raises the millhead out of the tank. Standard equipment includes a stainless steel shaft and millhead.

Complete information may be obtained from the company, 148-156 Classon Ave., Brooklyn 5.

#### New Drum Lifting Hook

A new drum lifting device has been designed by Morse Manu-



facturing Co., East Syracuse, N. Y., for handling drums of volatile liquids in hazardous areas. Designated "#41M," the device consists of cast hooks made of non-sparking manganese bronze which are connected to a bronze ring three inches in diameter with double brass rods 7/16 of an inch in diameter. The hooks have clearance for a 3/4 inch rim and accommodate standard 55-gallon drums and drums up to 34 inches in length. The device has a capacity of 1,000 pounds.

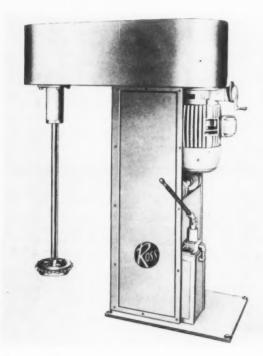
#### **Water Treatment Injectors**

Two new water treatment injectors tradenamed "E-Z" were recently introduced by Minipump

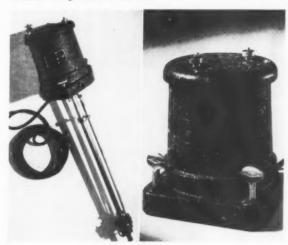
Corp., Phoenix, Ariz., and are designed to eliminate the task of manually putting water treatment material in the make-up water of boilers and refrigeration units. Model 7 features a telescoping pump that may be adjusted to fit drums from 15 to 55-gallons. All controls are fastened to the top of the drum by an adapter and have levelling screws to maintain balance. Tubing is connected to the discharge line of the injector and made fast to the water pipe inlet and an electrical cord is hooked up to the pump motor to start the unit. In Model 5 the pump is located in the top body and a "tox" line is used which hangs inside the drum. This model has application when pressures are slight and light materials not containing a scavenger are used.

#### Horix Names Wirthlin

Robert G. Wirthlin has been appointed sales manager for Horix Manufacturing Co., Pittsburgh, Pa., it was announced last month by Helen Fairbanks, president. Mr. Wirthlin was previously western sales manager for Metro Glass Co., Jersey City, N. J. Horix makes liquid filling equipment. ment.



New high speed dissolver or disperser announced recently by Charles Ross & Son Co., Brooklyn, shown at left. Unit mixes, disperses, dissolves, emulsifies or deagglomerates most types of pastes, liquids and heavy pastes. Two new water treatment injectors shown below were announced last month by Minipump Corp., Phoenix, Ariz. Units are designed mechanically to put water treatment materials in water for boilers, refrigeration units, etc.



# HOW TO PLAN NEW STRATEGY



representative and doodled with some

figures. He found that his company

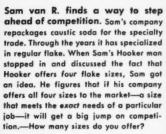
spends \$4.00 on in-plant handling costs

for every ton of caustic soda. The Hooker

man showed John B. that he could cut this

50% liquid Hooker caustic.







Fred P. makes a switch that saves him five figures. Fred's Hooker man pulled out a booklet and turned to a no-mograph on page 13. Fred checked a few figures in his own books and drew a line on the nomograph. This simple procedure showed Fred that by switching from 50% caustic to Hooker's 73%, he would save enough on freight alone to pay for any extra equipment he might need and still show a solid black line on his company's ledger for years to come.

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# NEW Patents

The data listed below is only a brief review of recent patents pertinent to the readers and subscribers of this publication. Complete copies may be obtained by writing to the publisher of this magazine: — MacNair-Dorland Co., 254 W. 31st Street, New York 1, N. Y., and remitting 50c for each copy desired. For orders received from outside of the United States the cost will be \$1.00 per copy.

No. 2,884,207. Valve Operating Spray Button for Aerosol Dispensers, patented by Robert H. Abplanalp, Bronx, N. Y., assignor by direct and mesne assignments, of one-half to John J. Baessler, Yonkers, N. Y. Disclosed is a valve stem operating button for an aerosol dispenser comprising: a unitary body having in its bottom a valve stem receiving socket extending upwardly and terminating below the top of said body, said unitary body having in its lateral face an unencumbered recess with a substantially cylindrical peripheral wall and a substantially flat bottom and which recess is at all times completely open to the exterior of the body, there being formed within said unitary body a spray-pattern-forming frusto conical discharge passage interconnecting said valve stem receiving socket with the mid portion of the substantially flat bottom of said recess in spaced relation to the peripheral wall of said recess lying exterior to an imaginary cone figuratively constituting an extension of the surface of the frusto conical wall of the discharge passage and extended through said recess.

No. 2,883,089. Aerosol Valve Assembly, patented by Joseph L. Kiraly, Forest Park, Ill., assignor to Aerosol Reserach Co., Forest Park. This patent describes an aerosol valve assembly, a mounting cup and a valve secured together in fixed relationship, said valve having a valve stem projecting above said cup, a metering orifice in said stem, an annular gasket fitting around said stem, the inner edge of said gasket normally sealing said metering orifice, the peripheral edge portion of said gasket being securely held in fixed relationship to said cup and valve, and a spray tip slidably mounted on said stem and secured against separation from said assembly; said spray tip engaging said gasket and operable, under depressing finger pressure, to displace the inner edge of said gasket from sealing engagement with said metering orifice.

No. 2,884,166. Holders and Valve Controlling Mechanism for Pressurized Containers, patented by

Peter S. Vosbikian and Thomas S. Vosbikian, Melrose, Pa. A support and control of pressurized containers is patented comprising a handle having a longitudinally extending opening through it and having a longitudinal groove in its top face, a strand having a lower stretch extending through said opening terminating at its forward end in a clamping loop and at its rear end in a rear loop positioned in rear of the handle, said rear loop merging into an upper stretch seated in said groove and terminating above said clamping loop, and a trigger pivoted on the handle and having a transverse opening through which the upper and lower stretches of the strand pass.

No. 2,881,808. Aerosol Valve, patented by Wilfrid H. St. Germain, Batavia, Ill., assignor to Aerosol Research Co., Forest Park. Claimed as an inventior is an aerosol valve comprising a solid, one-piece valve body, a valve stem of uniform diameter integral with said valve body, said valve stem projecting from said valve body and provided with a longitudinal bore, extending downwardly into said valve body and terminating below the upper end of said valve body projecting laterally beyond the outer circumference of said valve stem at right angles to said stem, said laterally projecting upper end being provided with an annular groove, an annular rim portion of said valve body defining the outer edge of said annular groove, an annular shoulder portion of said valve body adjacent the outer surface of said valve stem defining the inneredge of said annular groove, said rim and shoulder portions being adapted to be seated in sealing engagement with a sealing gasket, and an internal orifice extending through said valve body, one end of said orifice being positioned in said annular groove and the other end of said orifice communicating with the longitudal bore in said valve stem below the upper end of said valve body.

No. 2,881,576. Method and Device for Pressure Filling Aerosol Dispensers, patented by Richard B. Nebinger, St. Louis, Mo.; assignor to Knapp - Monarch Co., St. Louis, Covered by this patent is a machine for filling crown type cans with fluids that are highly volatile at normal room temperatures comprising a stationary head defining a can-receiving opening in one side thereof, a movable can-receiving support positioned to the end side of said head opposite the can-receiving opening, means for moving said can-receiving opening to present a can therein for filling thereat and to move the filled can away from said head to permit removal thereof from said can-receiving support, seal means in said head for sealing a can relative thereto when the can is positioned in said can-receiving opening, said stationary head carrying a sleeve slidable therein and sealed relative thereto

and extending therefrom to the side opposite said one side, a segmented crimping collet carried by said sleeve and being magnetized to provide means assisting to support a crown cap thereon, said cap when carried on said head being normally in spaced relation from a can that is operatively received in the can-receiving opening of said head, a collet actuating plunger slidable in said sleeve and sealed relative thereto, said plunger being operatively connected with said sleeve through springs located outwardly of said stationary head which permit of simultaneous movement of said plunger and sleeve to a position whereat ger and sleeve to a position whereat the crown cap engages a can and thereafter permits of additional move-ment of the plunger relative to the sleeve to effect expanding the collet for crimping the crown cap to the can, said head with a can operatively posi-tioned in the can-receiving opening cooperating with said sleeve and plunger carried by said head to define a pressure chamber for receiving therein highly volatile fluid under pressure, means for effecting move-ment of the plunger and sleeve to effect moving the crown cap into closing relation with the can and to effect crimping the crown cap to the can, means for introducing fluid under pressure through said stationary head into said pressure chamber and there-by into the can while the crown cap is spaced therefrom.

No. 2,884,160. Protective Cap for Aerosol Containers, patented by Robert H. Abplanalp. Bronxville, N. Y., assignor of one half to John J. Baessler, Bronxville, N. Y. Disclosed is a protective cap for an aerosol container having a bead at its top, said cap comprising: an inverted hollow cup having a top wall with an integral peripheral skirt, and a plurality of fin-like lugs accurately spaced apart about the interior of the cup, each lug being integral with the projecting downwardly from the top wall and integral with the projecting radially inwardly from the skirt and provided at its bottom with a saddle-like concavity to seat upon and overlie the bead of the container, and a hook-like portion to engage with the under side of said bead.

No. 2,876,200. Making Perborate Containing Detergents, patented by Bruce Strain, Wyoming, and Stanley L. Eaton and Kenneth R. Ericson, Cincinnati, O., assignors to Procter & Gamble Co.. Cincinnati. This patent teaches a process of producing a non-segregating granular detergent product having bleaching power during use in aqueous solutions in washing operations, comprising admixing sodium perborate tetrahydrate crystals with previously spray dried granular non-cationic synthetic organic detergent at a temperature within the range of about 150° F. to about 230° F., said temperature being sufficient to melt said perborate tetrahydrate to form a solution of the perborate in its water of crystallization, which solution, without substantial decomposition of perborate, is absorbed by outer pores and surfaces or detergent granules, then, promptly and within five minutes cooling the resulting product before substantial decomposition of perborate occurs.

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# Products and PROCESSES

#### Shampoo Analysis

An ion-exchange resin method was proposed recently for shampoos containing alkyl sulfate and a fatty acid alkanolamine condensate as active ingredients. Soap can also be determined by this method. The procedure is probably applicable to emulsions containing sulfated and sulfonated esters. S. H. Newburger (FDA) in J. Assoc. Offic. Agr. Chemists, 41, 664-8, 1958.

#### **New Spreader-Sticker**

A new liquid spreadersticker made with polyethylene has been introduced by the General Chemical Division of Allied Chemical Corp., New York. Tradenamed "Plyac," the product is said to give agricultural pesticide sprays spreading and sticking properties not previously possible with conventional spreader-stickers.

Made from a special form of emulsifiable polyethylene, "Plyac" is claimed to improve initial and residual effectiveness of sprays and can reduce dosages or number of applications. Other features of the product, according to the division, are that it is non-oily, non-ionic, and is compatible with a variety of spray mixtures.

#### "Carbopol" Data

B. F. Goodrich Chemical Co., Cleveland 15, has just published a bulletin on the use of "Carbopol" carboxy vinyl polymers in emulsions as emulsifiers and as emulsion stabilizers. "Carbopol 934" is the primary emulsifier in a waterless hand cleaner emulsion containing the following components:

	diams
Water	50.0
"Carbopol 934"	0.5
Sodium hydroxide (10% solution)	0.1
"Ethomeen C-25" (Trademark	
Armour & Co.)	0.5
Mineral oil	33.3
Isopropyl palmitate	16.7

This formulation has a viscosity (Brookfield at 20 rpm) of 108,000 cps and a pH of 5.9.

Compatible with anionic and nonionic emulsifiers the polymer used as a stabilizer can decrease the amount of emulsifier required for a stable emulsion. An automobile polish is given as an example:

#### Part A

	grams
SF-96 (300)*	4.0
"Viscasil" 10,000*	1.0
Oleic acid	2.0
Morpholine	0.5
Mineral Spirits	20.0
Part B	
Water	47.5
Triethanolamine (91%)	6.5
"Carbopol 934" (1%)	6.5
"Snow Floss"**	8.0
"Super Floss"**	4.0
2000	4.0

\*Silicone oils, trade name of General Electric Co.

\*\*Trade name of Johns-Manville Corp.

#### Soil Resistance of Fibers

The effect of various additives on the soiling and soil removal properties of different knitted fabrics was investigated and the following trends were established: Surface active agents, particularly nonionics, tend to decrease the dry soiling resistance of most fibers. Of the additives tested, colloidal silica finishes, developed for use as soil retardants, significantly improve the soil resistance of all fibers except "Dacron". Soil resistance of "Dacron" is decreased by application of additives. Soil removal by washing was found generally unaffected by most additives. The authors stress that no generalized conclusions can be drawn from data so far developed. L. G. Johnston et al, American Institute of Laundering, Joliet, Ill. American Dyestuff Reporter, 47, 933-40, 1958.

#### **Onyx Quaternary Powder**

"BTC-824", a quaternary claimed to exhibit high water hard-

ness tolerance is now available in dry powdered form, it was announced recently by Onyx Oil & Chemical Co., Jersey City, N. J. The product has heretofore been offered as a 50 per cent active aqueous concentrate. It now comes as 20 per cent active white free flowing powder on urea as a carrier.

Active ingredients of "BTC-824" are n-alkyl dimethyl benzyl ammonium chlorides (60% C<sub>14</sub>, 30% C<sub>16</sub>, 5% C<sub>12</sub>, 5% C<sub>18</sub>). Said to exhibit high biocidal properties the powder dissolves with no sediment in dilution levels up to 200 and 400 ppm, according to Onyx. Use solutions are claimed to be clear and stable.

"BTC-824" powder is supplied in 150 pound net fiber containers with aluminum foil as moisture barrier. Production samples are available.

#### **Basic Aerosol Formulas**

Experimental formulas for pressure packaged toiletries, drugs, chemical specialties, and protective coatings are included in a collection of 39 "Basic Aerosol Formulations" issued by General Chemical Division, Allied Chemical Co., 40 Rector Street, New York 6. General Chemical produces "Genetron" fluorinated hydrocarbon propellants. One of the most recently suggested formulas is for an aerosol spar varnish for indoor and outdoor use. This product is intended for protection of wood and metal surfaces. The aerosol formula calls

	weight %
Part A	25
Acetone	25
"Genetron" 12	50

Part A is china wood oil varnish formulated from the following components:

ght	7
5.15	
4.50	
9.55	
.80	

•Plaskon Div. of Libbey-Owens-Ford Glass Co., Toledo, O.

Drier contains 0.3 per cent lead, 0.04 per cent manganese, and 0.02 per cent cobalt calculated as

## To make a good shampoo... you need CARBIDE'S Ethanolamines

Good detergent action, mild alkalinity, and bland skin action-are three reasons why soaps based on mono-, di- or triethanolamine are used to make fast selling hair shampoos. For example, a good shampoo is made from a coconut oil soap of triethanolamine which combines excellent detergent, lathering, and rinsing properties.

Amine soaps, made with triethanolamine or monoand triethanolamine, are easily emulsified. Thus, excellent products can be prepared by simplified and lesscostly emulsification procedures. Also, soaps based on Carbide's ethanolamines are non-corrosive and have excellent storage stability.

You can obtain valuable technical information and suggested formulations for solvent emulsions, "soluble" oils, wax emulsions, and oil and wax polishes by calling your CARBIDE Technical Representative. Or, write Department B, Union Carbide Chemicals Company, Division of Union Carbide Corporation, 30 East 42nd Street, New York 17, New York. In Canada: Carbide Chemicals Company, Division of Union Carbide Canada Limited, Montreal.

#### UNION CARBIDE CHEMICALS COMPANY



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metals based on the weight of oil.

Mixing procedure for part A: Charge all of the resin and 75 per cent of the oil into a mixing vessel and bring the temperature to 210°C in 25 minutes. The solution will be slightly hazy. Raise the temperature from 210°C to 270°C in eight minutes. The solution should now be clear. Heat from 270°C to 292°C in three minutes and then add remaining 25 per cent of the oil. Hold temperature at 260°C for nine minutes then turn off heat. Solution should be clear. Cool to 232°C and add mineral spirits and driers. Allow to cool to room temperature. Varnish is tack free within 45 minutes and completely dry in six hours.

This product is suggested for pressure filling in a tin plate can fitted with a paint spray type valve. Pressure in the container is 39 psig at 70°F.

Prior to application the pressure package must be shaken for one minute, the valve is held 12 to 14 inches from surface to be treated.

#### **Spraying Systems Bulletin**

A new bulletin about its line of adjustable joints for spray nozzle installations was published recently by Spraying Systems Co., 3217 Randolph St., Bellwood, Ill. In the bulletin (No. 97) the company describes its adjustable joints for industrial use from one-quarter inch to two and one-half inch pipe connections. The joints are manufactured in brass, steel, and stainless steel with a ball and socket type design which permits positioning and rotating of the nozzle at any angle in a 40 to 50 degree arc range.

#### Crossett Names Clarkson

Tom C. Clarkson has been appointed sales manager of Crossett Chemical Co., Crossett, Ark., E. M. Godat, general manager, announced recently. He was formerly manager of chemical products sales.

# Book Reviews

#### **New Oakite Booklet**

An eight-page booklet titled "Industrial Floors: How to Clean and Care for Them" was recently published by Oakite Products, Inc., New York. Answers to soil removal problems on every type of floor are described in the brochure. Included are charts, lists of cleaning compounds, and descriptions of cleaning methods such as sanitizing, wax and paint stripping, and use of adsorbing liquids.

Copies of booklet F10598 may be obtained from Oakite, 157 Rector St., New York 6.

#### Robertet Issues Brochure

A 16-page illustrated brochure listing its natural fragrance materials for the soap, cosmetic, perfumery, and allied industries was recently published by P. Robertet and Co., whose main office and factory is in Grasse, France. Under its essential oils listing, the company has announced that a complete and modern Otto of Rose distillery in Turkey will be in production for the 1959 rose crop. Also noted, under the butaffors listing, is Robertet's butane gas cold extraction process.

#### New PFW Synthetic Musk

A new synthetic musk called "Tonalid" recently introduced by Polak's Frutal Works, Middletown, N. Y., has been reported by the company as receiving a keen response. The product is said to enable perfumers to achieve effects identical with those of macrocyclic musks but at a reasonable cost. Stable to alkali and light and nonirritating, "Tonalid" is expected to have application in the soap, chemical specialties, and toilet goods industries. Its introduction marks PFW's second entry in the synthetic musk field. The company introduced "Phantolid," a fixative with musk odor, in 1953. Both chemicals can be used together and

are of the indane-ketone type.

A brochure and samples of "Tonalid" may be obtained from the company.

#### **New Carbide Bulletin**

A number of uses for 2,6,8trimethyl-4-nonanol are described in a new four-page bulletin recently published by Union Carbide Chemicals Co., New York. In the bulletin the product is described as being particularly useful as a defoamer and coupler because of its branched structure. The compound is also reported to be an important intermediate for the manufacture of detergents, wetting agents, and dispersion agents. Typical reactions, properties, specifications, shipping data, and data on constant boiling point mixtures are detailed in the bulletin.

#### Lauryl Bromide from Mich.

Michigan Chemical Corp.. Saint Louis, Mich., last month announced the availability, in commercial quantity, of lauryl bromide. The product may be used as an intermediate in the preparation of quaternary ammonium salts exhibiting germicidal and algicidal activity, according to Michigan Chemical. It has a minimum bromine content of 30 per cent, free alcohol content of less than one per cent, and a specific gravity of 1.020 to 1.028.

#### **New Quaternary Compound**

A new quaternary compound called "Q-Cleaner" has been introduced by Associated Just Distributors, Inc., Baltimore. The compound is made by Fuld Brothers, Inc., for marketing by its affiliate, Associated Just Distributors. Product is designed to clean, disinfect, deodorize, and sanitize in one operation. "Q-Cleaner" may be used for all types of floors; and on glass, metal, porcelain, and painted surfaces.



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Name & Screen Designation	Typical Particle Size Range U. S. Standard Sieve No.		Screen Specification U.S. Standard Sieve N When Packed	
Granular 8/40 (Special Mesh)	+ 8 + 40	Nil 96.8%	+ 45	min. 95°
Granular 8/60	+ 8	Nil	+ 8	none
(Special Mesh)	+ 60	80.0%	+100	min. 90°
Granular 30/60	+ 30	0.5%	+ 30	mox. 19
(Special Mesh)	+ 60	69.8%	+100	min. 809
Granular 30 / 70	+ 30	0.3%	+ 30	тах. 1°
(Special Mesh)	+ 70	71.0%	+ 40	тах. 20°
Granular 30/80 (Special Mesh)	+ 30 + 80	0.8% 76.6%	+ 30	mox. 15
Granular 30/100	+ 30	Nil	+ 35	none
(Special Mesh)	+100	86.7%	+100	min. 85%
Granular 40/100	+ 40	Nil	+ 40	max. 0.5%
(Special Mesh)	+100	89.0%	+100	min. 88%
Granular 40/140	+ 40	0.1%	+ 35	none
(Special Mesh)	+140		+100	min. 50%
Granular 40/200 (Special Mesh)	+ 40 +200	0.1% 84.1%	+ 30	none
Granular 60/200 (Special Mesh)	+ 60 +200	0.1% 66.7%	+ 60	max. 1%
Granular 80/200	+ 80	2.0%	+ 60	none
(Special Mesh)	+ 200		+ 80	mox. 5%

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#### **TGA Meets**

(From Page 54)

"the possible implications of two decisions of Supreme Court of the United States which on Feb. 24, 1959, rendered an opinion of major importance in connection with cases from the states of Georgia and Minnesota. The decision involved the right of a state to tax the net income of an unlicensed foreign corporation engaged exclusively in interstate commerce with respect to the taxing states."

"If attempts are so made to levy income taxes on purely interstate business it may have far reaching effects on the distribution setup not only of this but many other industries," Mr. Johnston declared. He added that his own company is seriously concerned by these decisions. The Small Business Committee of the Senate has scheduled hearings on ways to help business adjust to the Supreme Court rulings "and we may get some legislation relief," Mr. Johnston pointed

The attempt of the Food and Drug Administration to bring under the Federal Food, Drug and Cosmetic Act by an interpretation synthetic toilet bars is a problem that "still has not been resolved," Mr. Johnston stated.

"One of the most difficult situations in which the cosmetic industry has ever found itself,"-the "hasty action on the part of government with respect to certain certifiable coal tar colors, now deemed to be uncertifiable," was discussed by S. L. Mayham, executive vice-president of TGA. In his talk, "What Can Happen When You 'Have a Law,' " Mr. Mayham predicted that "with respect to the present delisting order, I am confident that the actual delisting of these vital and harmless colors for lipsticks will not take place until a satisfactory bill has been enacted, at which time the delisting procedure will be moot and the actual delisting, even if carried through, will be of no effect."

Observations on patents based on a new use of an old material, and some general comments on the recently issued La Maur patent on aerosol hair sprays were made by Asher Blum, senior partner in the law firm of Mock & Blum

"It is firmly imbedded in patent law that you can get a patent . . . (on) a new use of an old material. As to whether the patent is valid, that depends upon whether the judge thinks that the substitution involves real discovery or real ingenuity." In other words, according to Mr. Blum, a valid patent cannot be granted upon "a mere new use of an old material (quite unchanged)." In addition, Mr. Blum pointed out, the "burden of proof is upon the defendant always to show that the patent is valid."

As to the second question related to the La Maur patent: Can such a patent cover the use of a material which is not specifically described in the patent?, Mr. Blum had this to say: "If the patentee tries to stretch his patent so as to include something which is not specifically mentioned in this patent, then the patentee must convince the judge, and he cannot claim generally a broad class of materials unless every member of that class is equally adapted for that specific purpose."

"The main controversy in the industry is whether the La Maur patent is broad enough to cover one or more copolymers of PVP and other vinyl compounds, such as a copolymer of vinyl pyrrolidone and vinyl acetate. This is also an issue which depends on the proof," according to Mr. Blum.

"The general rule as to infringement," he continued, "is that if PVP is merely mixed with a small percentage of some other material. then the mixture is an infringement. However, a copolymer is different in chemical structure from the polymer. Also, it is reasonable to assume that some copolymers would not make good hair sprays when dissolved in alcohol and mixed with "Freon." This can be tested by experiment.

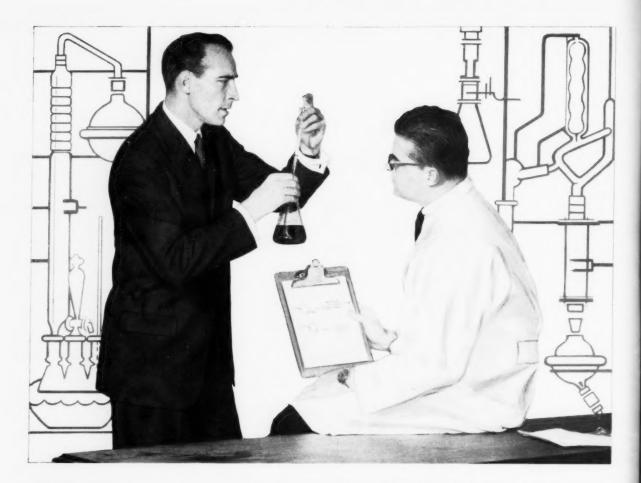
"If such be the fact, the La Maur patent cannot generally cover all copolymers. As one leading decision stated, the patentee cannot shoot to hit if the target is a deer and shoot to miss if the target is a cow. A patent cannot broadly claim a general class of substances for a particular purpose, unless every member of that class is suitable."

The 1960 25th annual meeting of the Toilet Goods Association will be held June 27-29 at Poland Springs House, Poland Springs, Me. The Scientific Section of TGA will hold its annual meeting May 14 at the Waldorf-Astoria Hotel, New York.

#### New Sanitation Assn.

A new association, called the Canadian Sanitation Standards Association, was formed at an inaugural meeting in March at the King Edward Sheraton Hotel, Toronto. Chief aims of the organization, which is composed of industrial sanitation products, equipment, and services, are to promote the importance of sanitation to the general public and to provide a meeting ground for an exchange of ideas and discussion of common problems of the industry. Several organizational meetings were held during the past year which led to the March meeting at which representatives from 19 sanitation firms were present.

Officers of the new association are: Stanley J. McKenzie, Thomas Gibson and Co., Ltd., president; John C. Decker, H. S. Hunnisett, Ltd., vice-president: Charles B. Hamilton, Fred Hamilton Sales Ltd., secretary; James L. Peterman, Peterman Products, treasurer; and J. V. Jacobson, G. H. Wood & Co., Ltd., recording secretary. Membership chairman is Gordon D. Hay, Gordon A. Mac-Eachern, Ltd., and publicity chairman is H. L. White, G. H. Wood & Co., Ltd.,



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- AMMONIUM NONYL PHENOXYETHYLENE SUL-FATE: Surco 57—an auxilliary foamer and detergent in liquid preparations.
- DESALTED SODIUM ALKYL ARYL SULFONATE: Surco SF42M—contains minimum salt in ethyl alcohol solution.
- LAURIC DIETHANOLAMIDE: Surco Stabilizer #2-a standard foam stabilizer and thickener. Prepared from 90% pure lauric acid.
- COCONUT DIETHANOLAMIDE: Surco Coconut Condensate—for ready modification with inexpensive fatty acids in floor and general purpose cleaners when formulated with phosphates and coupling agents. Thickening agent.
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- LAURYL SULFATES: Surco SLS and Surco AM-LS derived from high lauryl content alcohol. Improved foaming and detergency. For rug and upholstery shampoos.

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# News...

PEOPLE · PRODUCTS · PLANTS

Gordon R. Fulton Dies

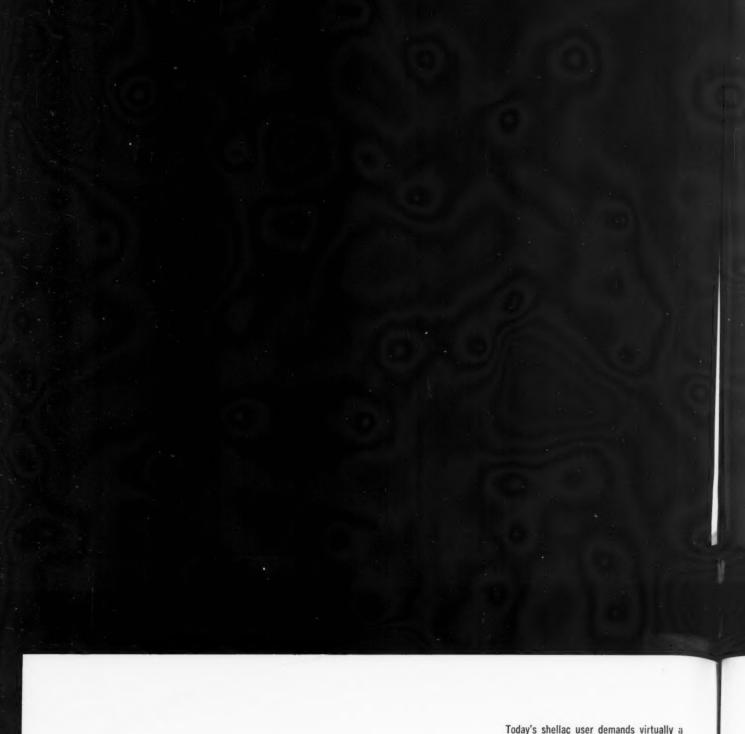
Detergent Sales Rise

Bricker Rejains Colgate

Purex Acquires Franklin

Menry P. Globus, formerly sales manager of Guardian Chemical Corp., Long Island City; N. Y., has been elected vice-predent and a director, the firm announced June 1. He has been with Guardian since the firm was organized in 1952 to make industrial chemicals and pharmaceuticals.





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At Mantrose, this improved shellac starts with selected top grade Indian seed shellac . . . scraped from its native twigs, washed, ground and sun-dried for shipment. Then Mantrose chemists and special equipment go to work!

Applied research determines the desired characteristics of the final product...careful temperature control at every stage of processing safeguards all of shellac's special thermoplastic and thermosetting properties. 24-hour bleaching, precipitation, filtration, automatic drying and refrigerated storage... chemically upgrade the shellac to precise standards.

Consultants from the Mantrose Laboratories are at your service. Let them help "tailor"

Cordon R. Fulton Dies Detergent Sales Rise Bricker Rejoins Colgate Purex Acquires Franklin Menry P. Globus, formerly sales manager of Guardian Chemical Corp., Long Island City. N. Y., has been elected vice-pred-



#### **Avard Fuller Elected President**

A VARD E. Fuller was elected president of the Fuller Brush Co., Hartford, Conn., it was announced last month by his father, Alfred C. Fuller, chairman of the board. He succeeds his brother, A. Howard Fuller, who died in an automobile accident May 9 near Lunning, Nev. Also announced were the elections of Ralph W. Carter as a director and vice-president and sales manager, and Harold L. Hart as vice-president.

The new president, who most recently was in charge of the

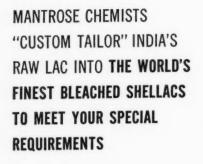
service in World War II to manage another Chicago branch, a position he held until his appointment earlier this year.

With the company for 39 years, Mr. Hart served in the sales and advertising departments and was named advertising manager in 1946. Later he was transferred to the Mohawk Brush Co., Albany, N. Y., as a vice-president but returned to the parent company two years later to head the cosmetics division. Mr. Hart was elected a director in 1953 and named gen-

Alexander, 46, an entomologist for Geigy Chemical Corp., Ardsley, N. Y.; George O. Griffiths, 61, director of traffic, American Home Products Corp., New York; and Henry John Reed, 42, an engineer with the Barrett division of Allied Chemical Corp., New York.

#### Purex Acquires Franklin

Negotiations were completed recently whereby Purex Corp., Ltd., South Gate, Calif., will acquire Franklin Research Co., Philadelphia, through an exchange of stock. Announcement of the merger was

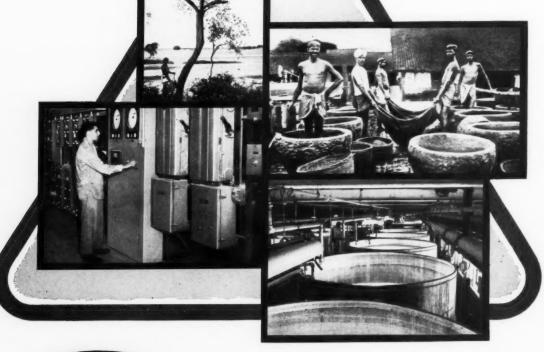


Today's shellac user demands virtually a "new" material . . . a shellac "groomed" to meet exacting specifications . . . combining the unique advantages of the natural product with modified characteristics derived from research and engineered processing.

At Mantrose, this improved shellac starts with selected top-grade Indian seed shellac ... scraped from its native twigs, washed, ground and sun-dried for shipment. Then Mantrose chemists and special equipment go to work!

Applied research determines the desired characteristics of the final product...careful temperature control at every stage of processing safeguards all of shellac's special thermoplastic and thermosetting properties. 24-hour bleaching, precipitation, filtration, automatic drying and refrigerated storage... chemically upgrade the shellac to precise standards.

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## News

#### **Avard Fuller Elected President**

A VARD E. Fuller was elected president of the Fuller Brush Co., Hartford, Conn., it was announced last month by his father, Alfred C. Fuller, chairman of the board. He succeeds his brother, A. Howard Fuller, who died in an automobile accident May 9 near Lunning, Nev. Also announced were the elections of Ralph W. Carter as a director and vice-president and sales manager, and Harold L. Hart as vice-president.

The new president, who most recently was in charge of the industrial division, joined the company in 1937 and worked in the machine design department. He was later named sales promotion manager and, in this capacity, spent two years visiting branch offices in all parts of the country. In 1942 he became a director and was appointed general sales manager in 1945. Three years later he was elected vice-president.

Mr. Carter, who was named Chicago area sales manager in January, began as a door-to-door salesman for the company in 1927. Later he became a dealer, was advanced to field manager and within four years was branch manager in Chicago. Mr. Carter returned from

service in World War II to manage another Chicago branch, a position he held until his appointment earlier this year.

With the company for 39 years, Mr. Hart served in the sales and advertising departments and was named advertising manager in 1946. Later he was transferred to the Mohawk Brush Co., Albany, N. Y., as a vice-president but returned to the parent company two years later to head the cosmetics division. Mr. Hart was elected a director in 1953 and named general sales manager.

A. Howard Fuller, who died in the automobile accident, was 46 years old. Also killed was his wife Dora, 46. The couple was reported to have been en route to Reno. Nev., about 170 miles north of the accident scene when a rear tire blew out and apparently threw their automobile out of control.

#### Three in Industry Killed

Three men connected with the soap and chemical specialties industry were among 31 persons killed when a Capital Airlines jetpowered Viscount apparently exploded in mid-air near Baltimore May 12. The three were: Claire C.

Harold L. Hart





N. Y.; George O. Griffiths, 61, director of traffic, American Home Products Corp., New York; and Henry John Reed, 42, an engineer with the Barrett division of Allied Chemical Corp., New York.

Alexander, 46, an entomologist for Geigy Chemical Corp., Ardsley,

#### **Purex Acquires Franklin**

Negotiations were completed recently whereby Purex Corp., Ltd., South Gate, Calif., will acquire Franklin Research Co., Philadelphia, through an exchange of stock. Announcement of the merger was made by A. C. Stoneman, Purex president, and Charles E. LaRoche, Franklin president. Mr. LaRoche and William J. LaRoche, executive vice-president, and the previous executive staff, are operating Franklin Research as a Purex subsidiary.

According to Mr. Stoneman, the acquisition complements Purex' operations in the commercial and industrial field. Purex annual sales volume prior to the merger was about \$68 million with only about \$3 million of this amount being sold in the industrial field. Its expansion up to the new acquisition was directed primarily towards household products through production of soaps, detergents, bleaches, and cleansers.

Franklin has been selling its line of soaps, detergents, waxes, silicones, resins, polymers, and wall and floor coatings to industrial and institutional users. Its annual volume is about \$6 million. As a result of the merger, the two companies now have an industrial sales force of 125 people operating out of sales and service centers in more than 30 cities.

Last year Purex entered the toiletries and drug sundries field with its acquisition of Allen B. Wrisley Co., Chicago.

#### Stepan to Buy Maywood

Agreements were concluded last month by Stepan Chemical Co., Chicago, for the acquisition of



Alfred C. Stepan

more than 80 per cent of the voting stock of Maywood Chemical Works, Maywood, N. J., Alfred C. Stepan, Jr., president, announced recently. In his announcement, Mr. Stepan indicated that offers would be made in the near future for all of Maywood's remaining capital stock. Total price paid by Stepan was reported at approximately \$5 million.

Maywood was founded 71 years ago and is a leading manufacturer of shampoo detergents, aromatic chemicals, and flavoring compounds. It also is a producer of lithium, thorium, and rare earth chemicals from its own mines in South Dakota. Albert J. Turner, president, continues in charge of the operations.

Also announced were the results of the company's operations for the first quarter of this year. Net income was \$155,921, or 25 cents per share, compared with \$243,666, or 39 cents per share, for the corresponding 1958 period. Sales also decreased from \$3,942,358 last year to \$3,474,643.

#### Shulton Loss in Quarter

Shulton, Inc., Clifton, N. J., last month reported a net loss of \$85,111 for the three months ended March 31, 1959. Net sales for the period were \$6,142,237, compared with \$5,694,805 for the cor-

responding period in 1958, when net income amounted to \$177,612. The company's report stated that 1959 figures were affected by a two week strike in February.

#### **Bricker Rejoins Colgate**

John L. Bricker has been appointed to the newly-created position of director of marketing planning in the corporate marketing department of Colgate-Palmolive Co., New York, it was announced last month by Edward H. Little, board chairman and president.

Mr. Bricker originally went with Colgate in 1949 in the toilet articles sales department. In 1955 he was appointed director of merchandising—toilet articles and the following year he joined Whirlpool Co., St. Joseph, Mich., as vice-president—marketing. Later he became executive vice-president and a director of Outdoor Advertising, Inc., New York, positions he held prior to rejoining Colgate last month.

In his new post Mr. Bricker is responsible for contributing to the development and implementation of marketing plans; assisting the corporate general management in setting overall marketing objectives; and in the development of corporate marketing policies. He also contributes technical advice and guidance to divisional marketing executives in many phases of their marketing programs.

John L. Bricker



#### **CMRA Elects Sayre**

The election of James E. Sayre as president was announced by the Chemical Market Research



James E. Sayre

Association during its two-day 19th annual meeting held in New York last month. Mr. Sayre is manager of market research in the plastics and coal chemicals division of Allied Chemical Corp., New York. He succeeds Kenneth R. Parker who is manager of market research for B. F. Goodrich Chemical Co., Cleveland.

Others elected by the association were: J. William Everson, Dow Chemical Co., Midland, Mich., president-elect for the next term; J. Ralph Macon, Atlantic Refining Co., Philadelphia, treasurer; Christopher G. Boland, III, Kidder, Peabody & Co., New York, secretary; and Broden R. Putnam, American Cyanamid Co., New York, and Walter C. Gwinner, Enjay Corp., New York, directors.

#### **Nopco Names Yacowitz**

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Harold Yacowitz has been appointed director of applied research in the fine chemicals division of Nopco Chemical Co., Newark, N. J., In his new post Dr. Yacowitz supervises the activities of the product development, biological research, and technical service laboratories, and the technical service bureau. Previously he was with the Squibb Institute for Medical Research and prior to that was an associate professor at Ohio State University.



A free cruise to Bermuda for two is the prize in a sales contest at Beach Soap Co., Lawrence, Mass., for its line of laundry products. Details of the contest were announced at the annual company sales meeting held recently. At the meeting are, standing, left to right: Maurice Bassinow; Lloyd T. Howells, vice-president; Kenneth E. Fulton, president; Edward C. Regan, sales manager; and Carl F. Mudgett. Seated, left to right, are Dana C. Jones, Emil M. Kern, Gerald Lankshear, John G. Bottoms, Murray Hamel, Edward H. Hooper, Charles L. Amateis, Carl C. Muller, Earl A. Jones, and John H. Schulthess.

#### **Pennsalt Names Two**

Nicholas M. Walker has been appointed administrative assistant to the president and Joseph T. Gormally assistant to the secretary for Pennsalt Chemicals Corp., Philadelphia, it was announced last month by William P. Drake, president.

Mr. Walker joined the company in 1945 as a salesman in the laundry and dry cleaning department. Four years ago he was named assistant secretary.

With Pennsalt since 1946, Mr. Gormally was most recently superintendent of industrial relations at the Wyandotte Works.

#### Realigns Division Sales

The sales organization of the phosphorus division of Hooker Chemical Corp., Niagara Falls, N. Y., was realigned recently into three sections. Robert B. Boyd has been appointed manager, industrial sales; W. Newell Wyatt becomes manager, sales administration; and Harold E. Frederick continues as manager, agricultural sales. The division was placed on an autonomous basis by Hooker April I, with F. Leonard Bryant as general manager. Its headquarters is at Jeffersonville, Ind.

Previously product manager, organic chemicals, for Hooker at Niagara Falls, Mr. Boyd is now in Jeffersonville. He joined the Oldbury Electro-Chemical Co. in 1936 which is now merged into Hooker.

Mr. Wyatt went with the Shea Chemical Corp. in 1954 which was merged into Hooker last year to form the phosphorus division. He has been active in the chemical industry since 1934.

Most recently sales manager of agricultural chemicals for the division, Mr. Frederick was senior vice-president—agricultural chemicals for Shea before the merger.

Robert B. Boyd



#### New "Odorless Deodorant"

A new "odorless deodorant" suitable for use in aerosol form and said to work by fixation, a chemical reaction with the odor which results in adsorbing it, is being produced by The Medical Gas Division of McGraw-Edison Co. in Stuyvesant Falls, N. Y., and is being marketed by National Cylinder Gas division of Chemetron Corp., Chicago. According to C. B. Gardenier, vice-president of Medical Gas, the chemical does not have a perfumed masking scent nor does it paralyze the sense of smell. McGraw-Edison is also marketing the product in the northeast as part of its line of hospital supplies but is negotiating with other firms with national distribution to market the chemical. NCG supplies the product in aerosol containers and in concentrated form.

Other features claimed for the liquid deodorant are that it inhibits growth of molds and mildew, is non-toxic and non-allergic, and will not irritate the skin, corrode metal, or stain.

#### Borax Names Edgar

Robert T. Edgar has been appointed division vice-president—production for the Pacific Coast Borax Co., a division of United States Borax & Chemical Corp., Los Angeles. In his new post Mr. Edgar has overall supervision of the company's plant in Boron and Wilmington, Calif.

W. Newell Wyatt



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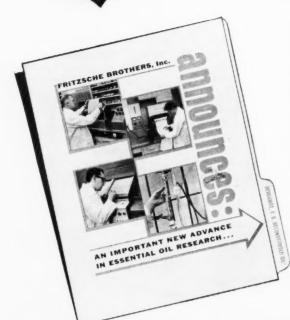
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### Puro Co. Celebrates 30th Anniversary

THE 30th anniversary of Puro Co., St. Louis manufacturer of household and industrial sanitation and maintenance chemical specialties, was celebrated with a dinner for key Puro employees, raw material, packaging and equipment suppliers at the Chase Hotel, St. Louis, recently.

Puro Co. was founded in 1929 by Alvin L. Saeks, president, a native of Minnesota and a former salesman of Liggett & Myers Tobacco Co., to sell moth products based on naphthalene and paradichlorobenzene. From 1929 to 1934 Puro sold direct to housewives on a door-to-door basis. At that time the firm's two leading brands were "Puro" and "Miracle Brand" moth products. In 1934 Puro went into the packaging of moth products for retail stores - mostly hardware, drug and department stores. At about this time, too, Puro set up Sterling Co. to sell to syndicate and variety store chains.

Puro began to diversify early with the establishment in 1936 of Puro Greetings, Inc., for the sale of greeting cards.

In addition to greeting cards, Puro in 1936 or '37 went into the manufacture and sale of paradichlorbenzene deodorant blocks. Puro further expanded its chemical specialties line three years ago by adding aerosol products and a full line of cleaning and maintenance products. Another expansion of Puro Co. took place in 1953 when Puro acquired Clean Home Products, Inc., Chicago, which sold its "Apex" line of moth control products mainly through drug, department and supermarket stores. Clean Home Products, which was founded 32 years ago, was moved from Chicago to St. Louis following its acquisition by Puro.

Besides Mr. Saeks, other officers of Puro include Norman E. Wilson, vice-president in charge of production and purchasing; Sam T. Saeks, brother of the founder and president, and vice-president of the chain store division; William Kitz, vice-president in charge of Clean Home operations and Howard Zachritz, vice-president of the industrial division.

Among the 76 persons at the anniversary dinner in the Zodiac room of the Chase Hotel in St. Louis, March 4, were representatives of approximately 10 firms which have been suppliers to Purosince its founding.

#### **Cowles Appoints Nielsen**

A. T. Nielsen has been named plant manager of the Skaneateles Falls, N. Y., operations of Cowles Chemical Co., Cleveland, N. E. Woonton, vice-president—manufacturing, announced last month. Previously manager of chemical and vitamin production of the Groton, Conn., plant of

Chas. Pfizer & Co., New York, Mr. Nielsen also was associated with Citro Chemical Co., Mayfield, N.J., which was acquired by Pfizer in 1948.

#### P&G to Sell Units in Cuba

Procter & Gamble Co., Cincinnati, announced plans last month to sell its two subsidiaries in Cuba but will continue the sale of its products there. The transaction was reported to have been under contemplation for the past several years with the current political situation having no bearing on the development.

A group of Cuban businessmen headed by Jose Viana, Emilio Giralt, and Frederick Garber, who have been major executives of the subsidiaries, will acquire the companies, Sabates Sociedad Anonima and Procter & Gamble Products Co. of Cuba, S. A. The sum involved was not disclosed.

"Procter & Gamble is not stopping business activity in Cuba," Walter L. Lingle, Jr., P&G executive vice-president—overseas operations, stated last month. "We will retain ownership of our principal trademarks. The Cuban businessmen acquiring the subsidiaries will manufacture and market products under Procter & Gamble's existing international brand names. In addition, P&G expects to introduce new products into Cuba through the use of the new Cuban owners' facilities."

The two subsidiaries manufacture and market soaps, detergents, shampoos, toothpaste, and shortening under the name Sabates. They are located in Havana and employ approximately 570 persons. P&G has operated in Cuba since 1931.

#### Cairns Heads IRI

Robert W. Cairns, director of research for Hercules Powder Co., Wilmington, Del., was recently elected president of Industrial Research Institute, Inc., an organization composed of industrial scientists representing 160 manufacturing companies.

At Puro's 30th anniversary party are. left to right: A. L. Saeks, president; Sam Saeks, vice-president; and Norman Wilson, vice-president.



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#### First Quarter '59 Detergent Sales Rise

ALES of synthetic detergents in the first quarter of this year are up 4.6 per cent over the comparable period of last year and 4.7 per cent over the fourth quarter of 1958. Soap sales on the other hand have dropped 9.7 per cent below the first quarter's volume and 18.7 per cent below sales reported for the fourth quarter of 1958. The total combined market for soaps and synthetics in the first quarter of 1959 shows a one half per cent gain over the corresponding quarter of 1958 and a drop of 2.3 per cent below the fourth quarter of last year. These statistics are taken from the quarterly "Sales Census" of the Association of American Soap and Glycerine Producers, Inc., which is collated from reports by 62 member companies.

Total soap and detergent sales in the first quarter of 1959 are reported at 975,294,000 pounds valued at \$249,417,000 compared with 969,388,000 pounds and \$242,-640,000 in the first quarter of last year. Sales of synthetic detergents in this year's first quarter increased to 732,896,000 pounds valued at 700,923,000 \$179,144,000, from pounds and \$170,613,000 reported for the comparable three months of 1958. Sales of soap in the 1959 quarter dropped to 242,398,000 pounds having a dollar value of \$70.273.000 from 268.465,000 pounds and \$72,027,000, reported in last year's first quarter.

For the first time in several years bar toilet soap sales show a downward trend. Still accounting for about half of all tonnage sales of soap, they dropped to 119,412,000 pounds, a 9.8 per cent loss against the first quarter and a 19 per cent loss against the fourth quarter of 1958. Changes in classification may in part be the cause of this apparent drop: Starting with the fourth quarter of last year toilet bars include not only toilet

soap, but also synthetic and medicinal soap bars.

Shaving cream sales which include tube and jar, aerosols, and soapless products, show an increase of 24.5 per cent over the first quarter of 1958 whereas the figure for shaving soap, (stick, powder and cake) has dropped by 12 per cent. A change in reporting methods may account for these drastic fluctuations.

A 17.1 per cent increase in sales of yellow laundry bar soap over the first three months of 1958 is shown. This may possibly be accounted for by a government or other large contract.

Liquid synthetics sales have maintained their strong upward trend, showing an increase of 14.2 per cent over the first and of 13.2 per cent over the last quarter of 1958. Sales of packaged liquids show a growth of 20.7 per cent whereas those of liquid synthetics in bulk have dropped 26.5 per cent. This apparent contradiction is

Thousands of

Soap and Detergent Sales—First Quarter 1959 and 1958

Thousands of

	pounds		dollars	
	1959	1958	1959	1958
Soaps other than liquid Liquid soaps	236,342 757*	262,129 792*	69,036 1,237	70,760 1,267
Total	242,398	268,465	70,273	72,027
Bar toilet soaps Yellow & other than white	119,412	124,019	42,572	40,427
laundry bars	11,380	9.717	1,183	1,150
White laundry bars	24,637	31,141	5,495	6,227
Soap chips and flakes, pkgd.	6,754	10,062	2,318	3,384
Soap chips and flakes, bulk Soap, granulated, sprayed,	18,657	21,179	2,048	2,424
bulk** Soap, granulated, sprayed	16,521*	20,156	1,887	2,424
pkgd.** Hand pastes & powder, incl.	28,660	35,767	8,756	10,307
waterless hand cleaners Paste & jelly soaps (potash	2,166	2,671	373	381
& other)	3,054	3,092	434	438
Shaving soap (stick, powder, cake) Shaving cream (tube, jar,	542	616	342	372
aerosol, soapless)	4.296	3 450	3.580	3.040
Soap shampoo, liquid, pkgd Liquid soap, other than	11*	7*	48	48
pkgd shampoo	746*	785*	1,189	1,219
Miscellaneous or other soaps	263*	259	48	46
Detergents, solid	618,400	599,578	135,389	134,143
Detergents, liquid	114,496	98,728	43,755	35,820
Total	732,896	698,306	179,144	169,963
Detergents, solid, other than shampoo, pkgd.	584,930	567,684	179,144	169,963
Detergents, solid, other than shampoo, bulk	30,711	30,407	4,532	4,154
Detergents, liquid, other than shampoo, pkgd.	12,631*	10,465*	37,554	31,053
Detergents, liquid, other than shampoo bulk	1.234*	1,679*	1,519	1,940
Detergent shampoos, liquid	3.576	3,104	4.682	4,001
Detergent shampoos, solid	2,759	2,576	2,055	1,641

<sup>\*</sup>expressed in thousands of gallons

<sup>\*\*</sup>now includes washing powder



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caused by a change in demarkation between packaged and bulk. Following the general tendency toward larger packages any unit up to and including one gallon is now considered packaged, whereas a gallon previously was considered a bulk unit. Sales of liquid synthetic shampoos are up 15 per cent from last year's first quarter.

Sales of scouring cleansers were reported as 100,880,000 pounds valued at \$14,167,000. Comparative figures for 1958 are not available.

The synthetics' share of the total market is still edging upward. It amounted to 75.1 per cent (tonnage-wise) in the first quarter of this year compared with 72.3 per cent for the first three months of 1958.

#### **Allied Names Cubberley**

Adrian H. Cubberley has been advanced to coordinator of chemicals for the research and development department of the plastics and coal chemicals division, Allied Chemical Corp., New York, it was announced last month by M. H. Bigelow, division vice-president. In his new position Mr. Cubberley is responsible for new chemical development and liaison between sales, manufacturing, and the research department.

With Allied since 1942, he served most recently as administrative assistant to the administrative supervisor of the research and development department.

Adrian H. Cubberley



#### **Armour Elects Patton**

 F. B. Patton has been elected senior vice-president of Armour and Co., Chicago, it was an-



F. B. Patton

nounced last month by William Wood Prince, president. A company vice-president since 1955, Mr. Patton was previously in charge of the Armour Auxiliaries division. In his new post he assists E. W. Wilson, executive vice-president, in administration of the divisions of Armour Chemical Industries.

In a divisional realignment the Armour Auxiliaries division designation has been discontinued and the company's soap business has been combined with canned foods in the new grocery products division. The chemical division now handles the production and sales of fatty acids, fatty acid derivatives, industrial oils, and anhydrous ammonia. A new grouping, Armour Alliance Industries, Alliance, O., handles production and sale of coated abrasives, cushioning products, and adhesives.

#### **Snell Resumes AHA Tests**

Foster D. Snell, Inc., New York, was recently authorized by the American Hotel Association to continue to test maintenance cleaning and polishing compounds for listing in a 1960 Certified Products List to be issued in January which will include all currently listed products as well as those tested before Dec. 31. Last year's test program resulted in the 1959 Certified Products List which was issued to

5,500 AHA members as well as purchasing agents for hospitals and other institutions. More than 16,500 copies of the 1959 listing have been distributed since February, Snell reports. Manufacturers who desire to have their products tested for listing should request authorization forms and the product examination fee schedule from the AHA, 221 W. 57th St., New York 19, or Snell, 29 W. 15th St., New York 11.

#### **New Yardley Laboratory**

A new research division known as Yardley International Research Laboratories, Union City, N. J., was recently added to the world-wide organization of Yardley and Co., Ltd., London, England. Sabbat J. Strianse, formerly director of research for Shulton, Inc., Clifton, N. J., has been named director of research in the new division. He and his staff will engage in long range studies Yardley says, to augment the organization's present research facilities.

Mr. Strianse joined Shulton in 1956 and was previously technical director for the Sofskin division of Vick Chemical Co., New York. Prior to that he had served as senior research chemist with Richard Hudnut. He is a past president of the American Society of Cosmetic Chemists.

The function of the new division is reported to be the exploration of new concepts in cosmetic chemistry and their practical application.

Sabbat J. Strianse



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#### **Bluman of Harchem Retires**

Ernest H. Bluman, president of the Harchem division of Wallace & Tiernan, Inc., Belleville,



Ernest H. Bluman

N. J., retired from the company April 30 but continues as a consultant. Dr. Bluman was formerly executive vice-president of W. C. Hardesty Co., New York, which was acquired by Wallace & Tiernan in 1955. He had been with Hardesty since 1940. Educated in Germany, Dr. Bluman was active in the fatty acid and related chemical industries in Europe for a number of years.

#### **O-M Plans Investment**

Plans for investment of more than \$6 million to install electrolytic cells for increased and improved production of chlorine and caustic soda at the Niagara Falls, N. Y., chemical facilities of Olin Mathieson Chemical Corp., New York, were announced last month by Stanley de J. Osborne, president. The original O-M industrial chemical plant in Niagara Falls was built in 1896 and some of the mercury cells began production the following year.

#### **Snell Receives AIM Rating**

Foster D. Snell, Inc., New York, chemical and engineering consultants, was among 502 companies listed recently by the American Institute of Management, New York, as excellently managed in 1958. Snell received a rating of 8,000 on a scale of 10,000 points. Jackson Martindell, institute board chairman, who announced the listing, stated that its purpose was to recognize those firms whose management was doing most to increase productivity while benefiting their employees, shareholders, communities and the whole economy.

#### Gordon Fulton Dies

Gordon R. Fulton, 73, board chairman of Beach Soap Co., Lawrence, Mass., died April 16 at the Newton-Wellesley Hospital, Newton, Mass.

Mr. Fulton became general manager of Beach in 1931 and in ten years was owner and president of the firm. In 1956 he retired as president to become chairman of the board and his son, Kenneth E. Fulton succeeded him as president.

#### Nopco Acquires Wolf

Nopco Chemical Co., Newwark, N. J., recently acquired all the capital stock of Jacques Wolf & Co., Clifton, N. J., in a cash transaction involving more than \$3 million, Ralph Wechsler, president of Nopco, announced last month.

The Clifton firm continues as a wholly-owned subsidiary of Nopco retaining its previous staff and sales force with G. Daniel Davis, Nopco executive vice-president, as president. Other new officers include Nopco vice-presidents Harry A. Batley and Harold A. Swanson as vice-presidents and Nopco assistant secretary, Julius J. Denzler, as assistant secretary. Wolf officers, G. J. Desmond and Arnold Pfister, are treasurer and secretary, respectively, of the new subsidiary.

#### Eight Join Drackett

Eight executives of Judson Dunaway Corp., Dover, N. H., which was recently acquired by Drackett Co., Cincinnati, have joined the parent firm in various capacities.

Sam Knox, former president of Judson Dunaway, is now executive vice-president — sales of Drackett Products Co.

Formerly executive vice-president and treasurer, Eugene Jalbert has become assistant to the president of Drackett.

Don McDaniels, secretary of the New Hampshire firm, is now controller, and George L. Jaques, who was vice-president, is production manager.

John Monaghan, who was sales manager of the "Expello-Buga-boo" division, retains the same position with Drackett Products, as does Don Knox, who was purchasing agent.

Formerly Dunaway traffic manager, Nye Holmes has become assistant traffic manager.

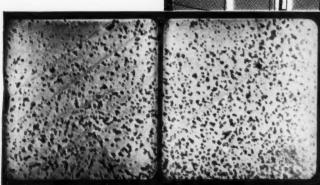
Stanley Manning, Judson Dunaway vice-president — sales, is now eastern regional sales manager in New York for Drackett Products Co.

Sam Knox

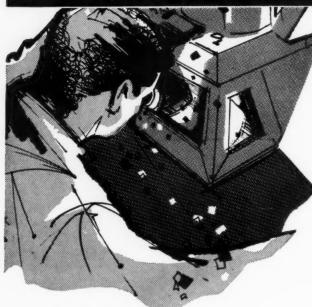


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William A. McDonnell, left, president of the Chamber of Commerce of the U.S.. presents the Chamber's national award for distinguished achievement in the public interest to Bernard Kelly, center, NSSA executive secretary, and Harold Pond, immediate past president, representing the association.

#### Join L. A. Soap Board

The election of two new directors, the reelection of Andrew K. Forthmann as president and chairman, and the renaming of six other directors was announced last month by Los Angeles Soap Co., Los Angeles.

Jan Oostermeyer, former president of Shell Chemical Corp., and Dr. Ulric Bray, president of Bray Oil Co. of Los Angeles, have joined the board of directors of Los Angeles Soap. Mr. Oostermeyer is also a director of Food Machinery & Chemical Corp., Siegler Corp., Fluor Corp., and Permanent Filter Corp.

The other new director is an

authority in the petrochemical and sulphonate fields. His firm operates plants in Los Angeles and Richmond, Calif., New Jersey and France.

Mr. Forthmann serves as president of 99 year old Los Angeles Soap Co. and White King Soap Co. He is currently serving his second term as president of the Association of American Soap and Glycerine Producers, Inc.

Other Los Angeles Soap Co. directors re-elected at the annual meeting of stockholders in Los Angeles are: Nora Forthmann, Howard Williams, Thomas A. Dockweiler, A. S. Van Denburgh, Bernard F. Hill and Victor Rosetti.

#### C. of C. Honors NSSA

The National Sanitary Supply Association, Chicago, recently was awarded the top national award by the Chamber of Commerce of the United States for distinguished achievement in the public interest by a medium size trade association. The award was earned by NSSA's "Modern Cleaning Methods Home Study Course" which is available to housekeeping administrators, supervisors, and custodians in industries and institutions.

Bernard Kelly, executive secretary of the association. and Harold Pond, immediate past president, accepted the award on behalf of the NSSA membership from William A. McDonnell, president of the national Chamber, at the recent annual achievement dinner of the Chamber of Commerce of the U. S. in Washington.

More than 800 custodians and cleaning administrators already have enrolled in the NSSA course.

#### Petrochemicals Names Rep.

Petrochemicals Co., Long Beach, Calif., recently appointed Wasatch Chemical Co., Salt Lake City, U., as distributors in the intermountain area for their line of "Petro" wetting agents, surfactants, and anti-caking materials. Wasatch will distribute the products to customers in New Mexico, Colorado, Utah, Idaho, and Wyoming.

Andrew K. Forthmann



Jan Oostermeyer



Ulric Bray



IUNE, 1959

#### Holdman Addresses PCA

Ernest E. Holdman, former vice-president and general manager of the international division of Heyden Newport Chemical Corp., New York, recently told members of the Pulp Chemicals Association that the pulp industry "will be the principal source of turpentine long before 1975." Speaking before the association's sulphate turpentine division at a meeting last month in Ponte Vedra Beach, Fla., Mr. Holdman noted that the terpene spec-

ialist can develop the expanding markets needed because of the growth of sulphate wood turpentine as a chemical raw material. He pointed out that sulphate wood turpentine accounts for more than 50 per cent of annual U.S. crude turpentine production and that terpene research has led to the development of perfumery components and flavoring materials, with newer products forecast for insecticides, rubber chemicals, and plastics.

## Eleven members of the research department staff of the inorganic chemicals division of

research department staff of the inorganic chemicals division of Monsanto Chemical Co., St. Louis, Mo., last month received the division's Gaston DuBois Award for research accomplishment during 1958. Named in honor of Gaston DuBois, a former Monsanto president, the award is presented annually as a divisional honor.

This year four of the awards went to individuals and a fifth was presented to a group of seven scientists. Individual awards went to Melvin C. Thompson for research sales service in agricultural chemicals; John R. Van Wazer for the authorship of a treatise entitled "Phosphorus and Its Compounds:" Chung Yu Shen for accomplishments in the technology of sodium phosphate; and William F. Symes for his contributions in bringing chlorinated cyanuric acids and salts into commercial production.

#### **CIBS Golf Outing Set**

CIBS of New York has scheduled its first golf outing of the season at the Nassau Country Club in Glen Cove, L. I., on Tuesday, July 7th. The event will include a luncheon, golf, and a dinner, according to Shockley C. Gamage, Magnus, Mabee & Reynard, Inc., New York, program chairman. Robert Roberts, Emery Industries, Inc., in Jersey City, N. J., and Lee Simmons, Imco Container Corp., New York, are co-chairmen of the golf committee.

#### **Babbitt Advances Tyriver**

Robert E. Tyriver has been advanced to manager of chainvariety store sales for the Charles Antell division of B. T. Babbitt, Inc., New York, it was announced last month by A. N. LaBelle, vice-president of Babbitt. Most recently regional sales manager for the company, Mr. Tyriver also has served as national chain store sales manager for Babbitt.



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#### **Du Pont Appoints Three**

Three appointments were announced recently in the dyes and chemicals division of E. I. du Pont de Nemours & Co., Wilmington, Del. Alexander C. Sutherland has been assigned to the Philadelphia district office and William W. Graham has been named a salesman in the Chicago district. Francis R. Desmond is now a demonstrator in the New England and New York districts.

Mr. Sutherland was formerly a salesman in the Chicago district and has been with the company since 1947. A laboratory group leader and demonstrator in the Chicago office since 1953, Mr. Graham joined Du Pont in 1941. Mr. Desmond has been a technical demonstrator at the division's Deepwater, N. J., technical laboratory for the past 12 years.

#### **Dow Expansion Set**

Dow Chemical Co., Midland, Mich., has begun engineering and construction work in an expansion program at its Louisiana division, Plaquemine, La. Building plans call for a polyethylene plant and facilities to produce vinylidene chloride and "Chlorothene," an inhibited methyl chloroform that is used as a propellant in aerosols. An investment of approximately \$12 million is involved in the new construction. The polyethylene plant is scheduled to go on stream in about 18 months and the vinylidene and "Chlorothene" facilities are expected to be in production about mid-1961.

#### **Chemway Sales Rise**

Net sales of Chemway Corp., Wayne, N. J., for the first quarter of this year increased to \$1,977,957, compared with \$1,857,646 for the corresponding period in 1958. Net income, however, declined from \$75,882, or seven cents per share, last year, to \$70,500, or six cents per share, this year. Charles T. Silloway, president, ascribed the decline in net income to temporary fluctuations in the company's foreign operations.



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#### **Perfume Plant Dedicated**

A new perfume factory of Industrial Perfumes (Private), Ltd., Bombay, India, an enterprise of Tata Roure-Dupont France, was recently dedicated at the Tata Oil Mills Compound in Sewri, India. Industrial Perfumes was registered in 1957 and is reported to be the result of a working arrangement between Tata Oil Mills and Roure-Bertrand Fils & Justin Dupont, Grasse, France. Naval H. Tata presided at the dedication ceremonies.

Roure-Dupont, Inc., in New York, also has announced that Andre Fromentin, its head perfumer, has returned to France to work in the Roure-Bertrand research laboratories. Mr. Fromentin had spent about 12 years in the United States.

Meanwhile the company reported that Francis Fabron, head perfumer for Roure-Bertrand, has been in New York since February as special project consultant.

#### **Carbide Names Steele**

Arthur B. Steele was recently appointed director – technical service laboratory for Union Carbide Chemicals Co., New York, in addition to his present duties as manager of technical service. Under his new assignment, Dr. Steele coordinates technical service programs designed to aid customers in the use of Carbide's materials, and in the redesign of products and processes to take advantage of new and improved materials. He came to the company in 1955 after 14 years with the Organic Synthesis Fellowship sponsored by Carbide at Mellon Institute.

#### **TGA Golf Winners**

Industry trophies were awarded last month to winners of the ninth annual toilet goods industry golf tournament held at Winged Foot Golf Club, Pelham, N. Y. The tournament is sponsored by the Toilet Goods Association. Winners were: Cecil Smith Trophy, Clifford M. Baker, Jr., Chese-

brough-Pond's, Inc.; B. M. Douglas Trophy, Richard A. Malmstrom, N. I. Malstrom Co.; B. E. Levy Trophy, Alex Alexander, Jr., Mary Chess, Inc.; and Maple Leaf Trophy, Walter D. Morton, Hazel Atlas Glass division of Continental Can Co.

More than 200 golfers participated and over 250 persons attended the banquet at which the trophies and other prizes were awarded.

#### **Emery Raises Price**

Emery Industries, Inc., Cincinnati, raised the price of its "Emery 600" fatty acid on May 4, to 15 cents per pound in tankcars. Previously the price was 12¾ cents per pound for the product which is an extender or replacement for coconut fatty acid. The company pointed out that the tankcar price of coconut fatty acid increased from 21 to 28 cents per pound since October 1958.

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At the CIBS Association Ladies Day luncheon held last month in New York are, left to right: Shockley C. Gamage, Magnus Mabee & Reynard, Inc., program chairman; Allen T. Stewart, Parfait Promotional Packaging Co., corresponding secretary; Candy Jones, director of Candy Jones Charm School: John Duncan, Hazel-Atlas Glass Co., CIBS president; and Maggi McNellis, National Broadcasting Co. Nearly 300 industry executives and guests attended the annual event at which Maurice Chevalier, the entertainer, received Everlasting Youth Award.

#### New "Stripe" Premium

Lever Brothers Co., New York, is offering a sendaway premium of six artificial roses with its "Stripe" toothpaste. Consumers may obtain the plastic flowers, which have a natural rose fragrance, for \$1.00 and both end flaps of any size "Stripe" carton. Advertising support for the promotion is scheduled to begin the middle of this month and to continue through July 25 with features on seven national television shows and in the July issue of a national magazine. The Italian-made roses are reported to have a \$4.25 retail value.

#### Clarke in Pennsalt Post

Robert W. Clarke has been appointed central area manager of the eastern region, chemical specialties division of Pennsalt Chemicals Corp., Philadelphia, J. Stanley Hall, division eastern region general manager, announced last month.

Mr. Clarke joined the company 15 years ago and was named manager of a new chemical specialties plant in Delaware, O., in 1954. He was appointed production manager of the division's central area last November retaining supervision over the production and distribution activities of the Delaware plant.

#### National Appoints Three

Three appointments to its staff were announced recently by National Milling & Chemical Co., Philadelphia, Pa. Winfield S. Howe has joined the company in its manufacturing division, James Powick is in the laboratory division, and John H. Cunnington is in the firm's sales division.

#### Monsanto Names Clement

S. R. Clement has been appointed to the newly created position of director of sales in charge of customer relations for the inorganic chemicals division of Monsanto Chemical Co., St. Louis, Mo., J. L. Christian, a company vicepresident and division general manager, announced last month. Mr. Clement was previously director of sales-agricultural chemicals and has been with Monsanto since 1935 when it acquired the old Swann Chemical Co. with which he was associated. Three other advancements were also announced as a result of Mr. Clement's appointment. P. G. Arvan, formerly director of sales, technical service, has replaced him. Dr. Arvan is succeeded by Louis Fernandez, previously product sales managerphosphates, who in turn has been replaced by A. Q. Svoboda, formerly supervisor - industrial phos-

#### Colgate Moves Ad Account

Colgate-Palmolive Co., New York, has moved the advertising for its "Super Suds" from Cunningham & Walsh, Inc., to Street & Finney, Inc., both New York advertising agencies. Billings for the product amount to an estimated \$500,000. Street & Finney already handles Colgate's "Kan-Kill" insecticide, "Florient" air deodorant, "Genie" all-purpose liquid detergent, which is currently marketed in ten western states, and the Colgate line of men's products.

W. S. Howe

J. Powick

J. H. Cunnington







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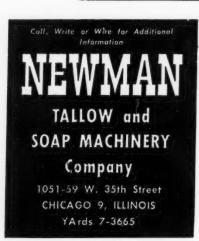
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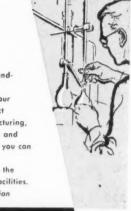
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For Sale: 200 gallon stainless steel jacketed mixing kettle with 3 H.P. double action agitator. Stainless steel lined storage tanks, 200, 500, and 1000 gallon capacity: 500 G. P.H. Homogenizer. Priced to sell. Paper-Pak, Inc., 712 Jefferson Ave., Buffalo 4, N. Y.

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For Sale: Full line new and used processing vats, pumps, coolers, homogenizers, fillers, etc. Send us your inquiries. Stuart W. Johnson & Co., Lake Geneva, Wis.

\$3,000,000 Liquidation: Chemical plant at Orange, Texas. Type 316 stainless steel tanks, kettles, heat exchangers, columns, stills, crystallizers, centrifugals, pumps, valves, etc. Wonderful values. Send for list. Perry Equipment Corp. 1410 N. 6th St., Phila. 22, Pa.

Aerosols... New book on aerosols, "Pressurized Packaging" by Herzka and Pickthall. First book of its kind ever published. 411 pages, 19 chapters. Price \$12. U.S.A. postpaid. \$12.50 elsewhere. Obtainable from MacNair-Dorland

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Now Available: 78 page listing of "Surfactants" (1958) Price \$2.50. Write John W. McCutcheon, 475 Fifth Ave., New York 17.

#### Speel and Schwarz Join

Henry C. Speel and Eugene W. K. Schwarz announced last month the formation of Schwarz, Speel & Associates, textile and chemical consultants, with offices at 101 West 31st Street, New York 1. Mr. Speel has been in the consulting field since 1952. He is located in Darien, Conn. A specialist in surfactants, textile auxiliaries, polyols, and petrochemicals, he -is joint editor with Dr. Schwarz of 'Textile Chemicals and Auxiliaries", a 552 page collection of monographs on chemicals used in textile processing. Mr. Speel's associations in industry included Wyandotte Chemicals Corp.; the Ammonia Division of E. I. du Pont de Nemours & Co.; Atlas Powder Co., Alrose Chemical Co., and General Aniline & Film Corp.

Dr. Schwarz, a consultant since 1945, specializes in fiber development, dyeing, and textile processing technology. A graduate of the University of Erlangen in Germany, he was associated with I. G. Farben in that country prior to coming to the United States in 1924 to take up a research post with General Dyestuff Corp.

The newly formed firm is closely associated with Skeist and Schwarz Laboratories in Newark, N. J.

#### Pennsalt May Split Stock

The board of directors of Pennsalt Chemicals Corp., Philadelphia, last month voted to recommend to shareholders a three for one common stock split, and to increase the authorized common stock to 10 million shares from the present two million. A special shareholders' meeting has been scheduled for July 1 to consider both proposals. If the proposals are approved, the board plans to declare quarterly dividends of 15 cents per share on the new stock beginning with the Aug. 1 payment. The board also plans to review payment of an extra dividend in December when results for the year can be better evaluated.

#### **Westvaco Names Dale**

Edgar T. Dale was recently appointed manager of the Los Angeles district office of the Westvaco Mineral Products division of Food Machinery and Chemical Corp., New York. With the company since 1940, Mr. Dale was most re-

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cently sales representative in southern California and Arizona and earlier held sales and traffic positions at the Newark, Calif., plant.

#### New Fuld Sales Rep.

Clayton J. Kubik was recently appointed western sales representative on a full time basis for



Clayton J. Kubik

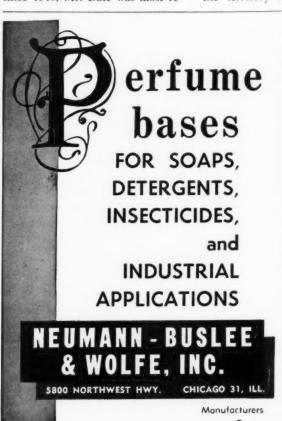
Fuld Brothers, Inc., Baltimore, Md. Mr. Kubik takes over part of the territory formerly served by Lon Clifton and James Hooks. In its announcement of the appointment, the company noted that expanding business in the west required the services of a full-time representative.

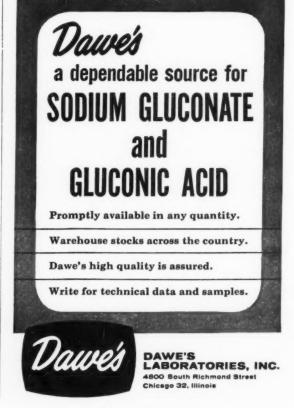
Mr. Kubik has had many years experience in the sanitary chemicals industry. He has been associated with Hale Sanitary Supply Co., Albuquerque, N. M.; Scientific Supply Co., Denver; and Economics Laboratory, Inc., St. Paul, Minn.

#### Carbide Names Fitzpatrick

Walter J. Fitzpatrick was recently appointed assistant to the product sales manager, Union Carbide Chemicals Co., New York. In his new post he assists in the marketing of higher alcohols, monomers, and plasticizers.

Mr. Fitzpatrick joined Carbide in 1951 as a technical representative and has served in the New York, Philadelphia and Boston district offices.





#### Rhodia Names Weaver

Everett J. Weaver has been appointed sales representative for Texas of the aromatic and odor



Everett J. Weaver

control division of Rhodia, Inc., New York, J. P. Leroux, sales manager, announced recently. Previously, Mr. Weaver was chief chemist for the Butler Chemical Co., Houston, Tex., and prior to that was analytical chemist for Olin-Mathieson Chemical Corp., New York. He makes his headquarters in Houston.

Also announced was the appointment of Charles E. Pressler as perfumer in Rhodia's research laboratories in New Brunswick, N. J. In the perfume industry for the past 20 years, Mr. Pressler was most recently chief perfumer for Germaine Monteil, Inc., New York. He also has been associated with Colgate-Palmolive Co., New York.

#### **New Sonneborn Wax**

L. Sonneborn Sons, Inc., New York, last month announced the development of a new microcrystalline wax called "Multiwax 200" for use in the manufacture of floor polish. Pale yellow in color, the wax is reported to have a melting point of 200 degrees F. and a needle penetration of 5 maximum. The product will be manufactured at the company's Petrolia, Pa., refinery and will be distributed by Petroleum Specialties, Inc., 205 East 42nd St., New York 17.

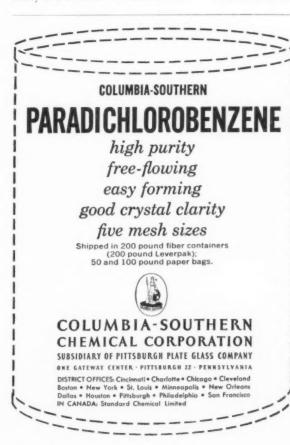
#### Mennen Appoints Three

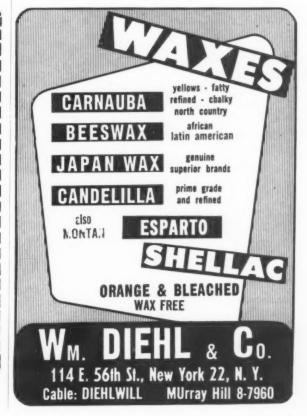
Jack Leonard has been named sales promotion manager and Irving Kiem has been appointed merchandising manager for the Mennen Co., Morristown, N. J. Mr. Leonard was previously in the promotion services division of Lever Brothers Co., New York. Prior to his appointment, Mr. Kiem was merchandising manager for Helene Curtis Industries, Chicago.

Also appointed was Howard Rand as product manager. He was formerly product manager for the Nestle Co., New York.

#### **DuBois Names Pistilli**

Philip Pistilli has been appointed manager of the institutional divison of DuBois Co., Cincinnati, manufacturers of chemical cleaning compounds and detergents for commercial and institutional use. Previously Mr. Pistilli was assistant to the president of the Hotel Muehlebach, Kansas City, Mo.





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#### COMING MEETINGS

American Chemical Society, national meeting, Atlantic City, N. J., Sept. 13-18.

American Oil Chemists Society, annual meeting, Statler Hilton Hotel, Los Angeles, Sept. 28-30; spring meeting, Baker Hotel, Dallas, April 4-6, 1960.

30: spring meeting, Baker Hotel,
Dallas, April 4-6, 1960.
Association of American
Soap & Glycerine Producers, 33rd
annual convention, Waldorf-Astoria Hotel, New York, Jan. 20-22.

Canadian Manufacturers of Chemical Specialties, second annual meeting, Royal York Hotel, Toronto, Nov. 2-4.

Chemical Specialties Manufacturers Association, 46th annual meeting, Mayflower Hotel, Washington, D. C., Dec. 7-9; 46th midyear meeting Drake Hotel, Chicago, May 16-18.

Drug, Chemical & Allied Trades Section, 69th annual meeting, Sagamore Hotel, Bolton Landing, Lake George, N. Y., Sept. 17-20.

Industrial & Building Sanitation - Maintenance Show and Conference, N. Y. Trade Show Building and New Yorker Hotel.
New York, Sept. 22-24.
National Agricultural Chemical Agricultural Chemical States of the Proposed States of the

National Agricultural Chemicals Association, 26th annual meeting, French Lick-Sheraton Hotel, French Lick, Ind., Oct. 21-23.

National Association of Variety Stores, 9th northwestern merchandise show, Learnington Hotel, Minneapolis, July 12-14; 19th southwestern show, Baker Hotel, Dallas, July 19-21; 18th southeastern show, Biltmore Hotel, Atlanta, July 26-28; 71st Chicago show, La Salle Hotel, Chicago, Aug. 2-5.

National Hotel Exposition, 44th annual show, Coliseum, New York, Nov. 2-6.

National Packaging Show, Convention Hall, Atlantic City. N. J., April 4-8, 1960.

National Pest Control Association, annual convention, Biloxi, Miss., Oct. 19-22.

National Sanitary Supply Assn. 37th annual convention, Fountainebleau Hotel, Miami, Fla., May 22-25, 1960.

Packaging Institute, 21st annual forum, Statler Hotel, New York, Nov. 17-19.

nual forum, Statler Hotel, New York, Nov. 17-19.
Packaging Machinery Manufacturers Institute, show, Coliseum, New York, Nov. 17-20.
Society of Cosmetic Chemists, New York Chapter, monthly

Society of Cosmetic Chemists, New York Chapter, monthly meetings, New Yorker Hotel, Sept. 9, Oct. 7, Nov. 4,
Synthetic Organic Chemical

Synthetic Organic Chemical Manufacturers Association, monthly luncheon meetings, Roosevelt Hotel, New York, June 9; Sept. 15; Oct. 13; Nov. 4; and Dec. 2. Toilet Goods Association,

scientific section, Waldorf-Astoria Hotel, New York, Dec. 1, 1959; May 11, 1960. 25th annual meeting, Poland Springs House, Poland Springs, Me., June 27-29, 1960. Western Packaging & Ma-

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## Eale Ends

REMOVAL of excess beef seems to have become really fashionable. Recently, we bumped into Howard Williams of the J. R. Watkins Co.. Winona, Minn. He had taken 25 lbs. off his six foot three frame and looked ten years younger. Then we ran into Bayard Johnson of Franklin Research (now of Purex) of Philadelphia who had dropped some twenty pounds. Both gentlemen looked positively sylph-like.

Nels Gothard who retired June 1 as chief chemist for the Sinclair Refining Co. was the guest of honor at luncheon at the CSMA meeting in Chicago last month. A past president of CSMA (1947 and 1948) and a former member of the board, he had been active in CSMA affairs for over 30 years. He completed 40 years with Sinclair. Tribute was paid to his long record of service to CSMA in a short address by Charles Beach, v.p. presiding at the luncheon.

The official CSMA diet for roaches has been changed! Dr. Al Weed of Olin-Mathieson reporting to the CSMA Board for the Insecticide Division requested official approval of the new diet which was granted amidst much laughter and joking. Dr. Weed stated that he cared not what wild roaches eat, but laboratory roaches are something like pets which must be kept fat, sleek and healthy.

Patent for a home soap making apparatus has recently been issued to one Willard L. Morrison of Lake Forest, Ill. as U.S. No. 2,876,082. To us, the apparatus seems quite complicated, sort of a Rube Goldberg affair. What puzzles us is why in this day and age anybody could be induced to buy or build a piece of complicated equipment to make soap at home. And why anybody would bother to patent a device for such a purpose is still a greater puzzle.

Dutch Cleanser did not put plastic tops and buttoms on its packages in place of metal simply because some-body in the advertising department had a brainstorm. Purex Corp., Ltd., owner of Dutch Cleanser, surveyed consumers. One of the key questions was, "What don't you like about cleanser?" The complaint received the greates number of times was that damp packages of cleansers left rust rings on sinks and shelves. Replace the metal with plastic. Presto—no rusty ring.

The Seaforth Highlander used as a symbol in published advertisements and on TV for the Seaforth line of men's toiletries has been under fire from members and former members of the famous Scottish regiment. It seems that the bloke shown in the advertisements is "out of uniform", that is he is improperly dressed. Something is awry

with his hose and his sporran. Imagine the horror of such to a true Scot! Anyway, Chesebrough Pond's, Inc. owner of Seaforth, we hear, is hastening to make changes and see that hereafter our Seaforth advertising friend is properly dressed.

The only soap equipment manufacturers exhibiting at the United States World Trade Fair, held at the Coliseum in New York. May 8-19, were the two well-known Italian companies, Mazzoni and Mecchaniche Moderne, both located at Busto Arsizio, Italy. It so happened that they had adjoining booths at the fair. And Dr. Monticelli of Mazzoni, who came here from Italy to represent his firm at the fair, and Mr. Canzoneri, American representative for Mecchaniche Moderne, had ample opportunity to chat in Italian "over the back fence" as it were.

From the American Chamber of Commerce in Spain comes word that the Spanish industry has undergone a process of evolution to meet modern demands. But the advent of the washing machine in Spain has brought about the development of a "sideline" to soap manufacture comprising liquid and dry synthetic detergents. Well, the "sideline" in America now enjoys 75% of the market. Maybe they are in for the same sort of rude awakening in Spain.

It's no coincidence that Al B. Sheen, sales manager in the midwest re-

gion for Crown Cork & Seal Co. (see 1 age 169 May SOAP) has eyes and features resembling a famed television personage. He should, his brother is Bishop Fulton J. Sheen.

Nicest publicity break aerosols have gotten in a long time happened at a baseball game in Chicago, June 2. On that night an invasion of gnats halted a ball game between the White Sox and the Baltimore Orioles, Some quick thinking soul produced two pressure packaged cans of insect repellent which unpire Hank Soar and White Sox bat boy, John Rosich used to spray the mound. An Associated Press photograph of the action made the sports pages of practically every major newspaper in the U.S.

Hildegard the Incomparable probably got the shock of her life when she "lured" Bill Pierson of Wheaton Glass into song during the recent TGA meeting in New York. In demonstrating her mastery of audience participation, Hildegard asked Bill to sing a little ditty with her. When his baritone poured out from the loud speakers Hildegard almost forgot her French. Someone neglected to inform her Bill once sang at the Metropolitan.

Al Stepan, Jr., head of Stepan Chemical Co., Chicago, left the CSMA meeting in the Windy City last month early in order to catch a plane to England. Al's son, Alfred, III. is studying at Oxford, where he also plays on the cricket team, Earlier, Alfred III, sounds like a blooming king, don't he?, attended the University of Notre Dame.

BUZZIN' COUSINS: Maurice Chevalier, star of screen and stage, acknowledges, with a big smack, kisses on both cheeks he had just received from Candy Jones, director of Conover Charm School. Miss Jones also hung medallion around neck of famed French entertainer. The bronze medal symbolizes the Everlasting Youth Award presented to M. Chevalier by John Duncan, right, of Hazel-Atlas Glass division of Continental Can Co., president of Cosmetic Industry Buyers and Suppliers, on behalf of the organization. Ceremony took place at CIBS' annual Ladies' Day luncheon at Toots Shor's restaurant, New York.



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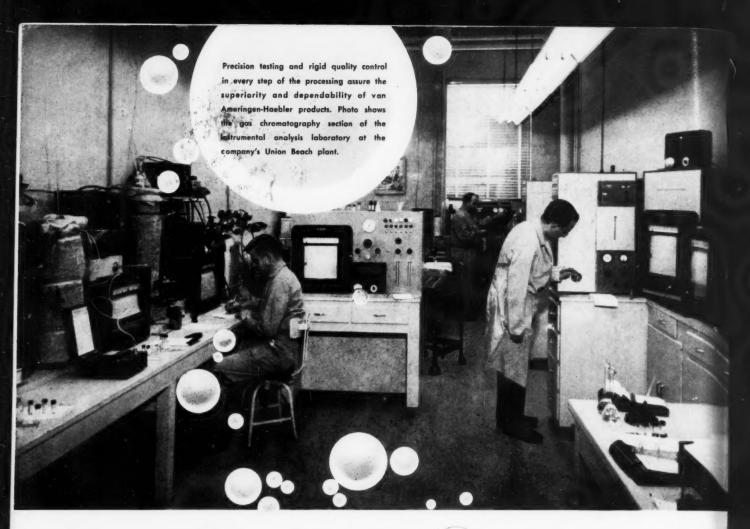




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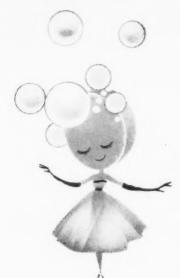
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